



County of Los Angeles CHIEF EXECUTIVE OFFICE

Kenneth Hahn Hall of Administration
500 West Temple Street, Room 713, Los Angeles, California 90012
(213) 974-1101
<http://ceo.lacounty.gov>

WILLIAM T FUJIOKA
Chief Executive Officer

September 20, 2011

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, CA 90012

Dear Supervisors:

ADOPTED
BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES

25 September 20, 2011

Sachi A. Hamai
SACHI A. HAMAI
EXECUTIVE OFFICER

Board of Supervisors
GLORIA MOLINA
First District
MARK RIDLEY-THOMAS
Second District
ZEV YAROSLAVSKY
Third District
DON KNABE
Fourth District
MICHAEL D. ANTONOVICH
Fifth District

**DEPARTMENT OF PUBLIC WORKS:
CASTAIC SPORTS COMPLEX POOL PROJECT
ADOPT MITIGATED NEGATIVE DECLARATION AND
MITIGATION MONITORING AND REPORTING PROGRAM
AWARD DESIGN-BUILD CONTRACT
SPECS. 6996; CAPITAL PROJECT NO. 69557
(FIFTH DISTRICT) (3 VOTES)**

SUBJECT

Approval of the recommended actions will adopt the Mitigated Negative Declaration and award a design-build contract for the Castaic Sports Complex Pool Project.

IT IS RECOMMENDED THAT YOUR BOARD:

1. Consider the Mitigated Negative Declaration for the Castaic Sports Complex Pool Project together with any comments received during the public review period; find that the Mitigated Negative Declaration reflects the independent judgment and analysis of the Board; adopt the Mitigation Monitoring and Reporting Program, finding that the Mitigation Monitoring and Reporting Program is adequately designed to ensure compliance with the mitigation measures during Project implementation; find on the basis of the whole record before the Board that there is no substantial evidence the Project will have a significant effect on the environment; and adopt the Mitigated Negative Declaration.
2. Approve the Castaic Sports Complex Pool Phase I Project (Capital Project No. 69557) and find that Perera Construction & Design, Inc., is the Responsive and Responsible Bidder that submitted the most advantageous and

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best value proposal for the Castaic Sports Complex Pool Phase I Project, and award a design-build contract to Perera Construction & Design, Inc., for a maximum contract sum of \$9,582,000 (inclusive of the base contract sum of \$9,391,222 and design-completion allowance of \$190,778), contingent upon submission of acceptable Faithful Performance and Payment for Labor and Materials Bonds, and evidence of required insurance filed by Perera Construction & Design, Inc.

3. Authorize the Director of Public Works, in coordination with the Chief Executive Officer, to exercise control of the design-completion allowance of \$190,778, including the authority to reallocate the allowance into the contract sum, as appropriate.

PURPOSE/JUSTIFICATION OF THE RECOMMENDED ACTION

Approval of the recommended actions will adopt the Mitigated Negative Declaration (MND) and award a design-build contract for the Castaic Sports Complex Pool Project located at 31230 Castaic Road, Castaic, California.

Project Implementation

The proposed Castaic Sports Complex Pool Project Phase I (Project) includes construction of an approximately 12,500 square-foot pool building with restrooms, changing rooms, staff offices, storage and utility rooms, outdoor recreational swimming pool, and shallow swimming pool with a combined splash pad; and associated site improvements, including parking, walkways, fencing, landscaping, grading, and underground utilities. In addition, the Project will include off-site road improvements, including construction of curb, sidewalk, and lighting along Castaic Road. The MND also analyzes the environmental impacts associated with possible future development (Phase II) of a 50-meter Olympic size swimming pool, and a new paved parking lot for 150 vehicles east of the pool complex.

Design-Build Contract Award

On October 20, 2010, the Department of Public Works (Public Works) issued a Request for Proposals (RFP) for design-build services for the Project. A total of 19 firms submitted prequalification questionnaires in response to the RFP, and the three highest scoring prequalified proposers were short-listed and invited to participate in the second part of the RFP for submission of technical and cost proposals. Based on the criteria stated in the RFP, Perera Construction & Design, Inc. (Perera) submitted the most

advantageous and best value proposal for design and construction of the proposed Project.

We recommend awarding the design-build contract for a not-to-exceed maximum contract sum of \$9,582,000 (inclusive of the base contract sum of \$9,391,222 and design-completion allowance of \$190,778). As part of the base contract sum, the 12,500-square-foot pool building will include a 4,000-square-foot shell expansion to accommodate future development of the 50-meter Olympic swimming pool.

The contract's design-completion allowance of \$190,778 is intended to facilitate the resolution of issues identified only during the design phase of the Project, including issues concerning the County's scoping documents or changes required by jurisdictional agencies or due to unforeseen conditions discovered during design, including any increased design and construction costs associated therewith. The inclusion of the design-completion allowance will facilitate the decision process during design and minimize potential delays that could occur while design phase issues are resolved. Control of the design-completion allowance will be exercised by Public Works, but Public Works will be required to notify and obtain written authorization from the Chief Executive Office (CEO) before any reallocation of funds from the design-completion allowance into the contract sum. The design-completion allowance shall not be used to fund the resolution of issues, conditions, or changes encountered during the construction phase.

Green Building/Sustainable Design Program

The Project will comply with the County's Energy and Environmental Policy. The Project will be designed and constructed to achieve the United States Green Building Council Leadership in Energy and Environmental Design (LEED) Silver level certification by incorporating sustainable design features to optimize energy and water use efficiency, enhance the sustainability of the site, improve indoor environmental quality, and maximize the use and reuse of sustainable and local resources.

Implementation of Strategic Plan Goals

The Countywide Strategic Plan directs the provision of Operational Effectiveness (Goal 1); Children, Family, and Adult Well-Being (Goal 2); and Community and Municipal Services (Goal 3), by investing in public infrastructure that will enhance recreational opportunities for County residents.

FISCAL IMPACT/FINANCING

The total Project cost, including programming, scoping documents, consultant services, plan check, construction, civic art allocation, miscellaneous expenditures, and County services, is currently estimated at \$13,000,000, which is consistent with the amount previously approved by your Board on July 20, 2010. The Project Schedule and Budget Summary are detailed in Attachment A.

The Project is funded with \$10,350,000 of Fifth District net County cost allocated to Enhanced Unincorporated Area Services (Proposition 62 funds) and \$2,650,000 of Park-in-Lieu Fees (Quimby) Special Funds in Park Planning Area No. 35.

Operating Budget Impact

Following completion of the Project, the Department of Parks and Recreation (Parks and Recreation) anticipates one-time, start-up costs of approximately \$34,000 for equipment and ongoing operating costs of \$841,000 for recreation and maintenance. Parks and Recreation will work with the CEO to confirm the appropriate level of funding and request one-time and ongoing funds in the Parks and Recreation Fiscal Year 2012-13 Proposed New Facilities request.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

Pursuant to your Board's Civic Art Policy adopted on December 7, 2004, as amended, the Project budget includes 1 percent of design and construction costs to be allocated to the Civic Art Fund.

ENVIRONMENTAL DOCUMENTATION

An Initial Study was prepared for the Phase I and Phase II Projects in compliance with the California Environmental Quality Act (CEQA). The Initial Study identified potentially significant effects of the Project in the areas of cultural resources, geology and soils, hazards and hazardous materials, and hydrology and water quality. Prior to the release of the proposed MND for public review, revisions in the Project were made or agreed to which would avoid these effects or mitigate them to a point where clearly no significant effects would occur as follows:

- Air Quality: Water for dust control, limit speed on unpaved areas, suspend excavation and grading during high winds, and minimize equipment idling time.

- **Cultural Resources:** Provide archaeological and paleontological monitoring of excavation, implement established protocols in the event of the inadvertent discovery of archaeological materials or paleontological resources, and implement established protocols in the event of inadvertent discovery of human remains.
- **Geology and Soils:** Design and construct the Project in accordance with the geotechnical investigation report and applicable sections of the California Building Code; and implement Best Management Practices during construction for dust control.
- **Hazards and Hazardous Materials:** Establish and implement soil management plan of procedures to follow in the event soil contamination is encountered; and implement a monitoring program for hydrogen sulfide.
- **Hydrology and Water Quality:** Design and construct the Project to provide proper drainage and avoid flooding; implement Best Management Practices during construction to prevent erosion and siltation; and implement cleaning and maintenance procedures for the pool complex that prohibit rinse water or trash from entering storm drains.
- **Noise:** Implement noise abatement measures so that noise is kept to a minimum during construction, and limit construction activities to certain hours in accordance with the Los Angeles County Noise Control Ordinance.

The Initial Study and Project revisions showed that there is no substantial evidence, in light of the whole record before the County, that the Project as revised may have a significant effect on the environment. Based on the Initial Study and Project revisions, an MND was prepared for this Project. The proposed Mitigation Monitoring and Reporting Program (Appendix C of Attachment C) was prepared to ensure compliance with the environmental mitigation measures included as part of the final MND (Attachment B) relative to these areas during project implementation. An additional mitigation measure in the area of biological resources was added in response to comments received from the Department of Fish and Game regarding nesting birds; however, the measure is added as a precautionary measure and not as a result of the identification of a new significant impact. There has been no substantial revision of the MND since public circulation that would result in a new avoidable significant effect and previously proposed mitigation measures and Project revisions will ensure that all significant environmental effects are reduced to below the level of significance.

Public Notice was published in The Signal Newspaper on May 15 and 16, 2011, pursuant to Public Resources Code Section 21092 and posted pursuant to Section 21092.3. During the 30-day comment period, which ended on June 20, 2011, comment letters were received from the following three public agencies: California Department of Fish and Game, County Sanitation Districts of Los Angeles County, and Newhall County Water District. After the comment period, one written response was received from the County of Los Angeles Fire Department. No comments were received from members of the public. All comments received, as well as responses to the comments, are contained in the final MND (Appendix F of Attachment C) and have been sent to the commenting public agencies pursuant to Section 21092.5 of the California Public Resources Code (CPRC).

The location of these documents and other materials constituting the record of the proceedings upon which your Board's decision is based in this matter are filed with the County of Los Angeles Department of Public Works, Project Management Division I, 900 South Fremont Avenue, 5th Floor, Alhambra, California 91803.

The Project is not exempt from payment of a fee to the California Department of Fish and Game pursuant to Section 711.4 of the Fish and Game Code to defray the costs of fish and wildlife protection and management incurred by the California Department of Fish and Game. Upon your Board's adoption of the MND, Public Works will file a Notice of Determination in accordance with Section 21152(a) of the CPRC and pay the required filing and processing fees with the Registrar-Recorder/County Clerk in the amount of \$2,119.

CONTRACTING PROCESS

On October 20, 2010, Public Works issued the RFP, including the standardized prequalification questionnaire, while the scoping documents were being prepared by J.C. Chang & Associates. This contract opportunity was listed in the County's "Doing Business with Us" website. The first part of the RFP required prospective design-build firms to submit responses to the standardized prequalification questionnaire. On November 18, 2010, 19 firms submitted prequalification questionnaires. Additionally, the RFP specified that the three highest scoring prequalified proposers identified by the evaluation committee would be short-listed and invited to participate in the second part of the RFP for submission of technical and cost proposals. The three short-listed firms were C.W. Driver, Perera, and Whiting-Turner Contracting.

On December 30, 2010, Public Works requested technical and cost proposals from the three short-listed prequalified firms. On February 14, 2011, Whiting-Turner Contracting declined to submit a technical and cost proposal. On February 16, 2011, the fourth short-listed prequalified firm, Tilden-Coil Constructors, was requested to submit a technical and cost proposal, and the proposal period was extended by approximately six weeks. On April 18, 2011, technical and cost proposals were received. On June 15, 2011, the proposals were evaluated and ranked based on technical design, construction expertise, proposed delivery plan, schedule, price, life cycle costs, skilled labor force availability, acceptable safety record, and design-build team personnel and organization. The evaluation was completed without regard to race, creed, color, or gender. Perera's proposal received the highest score and was determined to be the best value in accordance with the provisions of the RFP. A scoring summary of the proposals is included in Attachment B.

A standard design-build contract, in a form previously approved by County Counsel, will be used. The contract will contain terms and conditions supporting your Board's ordinances, policies, and programs, including, but not limited to, County's Greater Avenues for Independence and General Relief Opportunities for Work Programs (GAIN/GROW), Board Policy No. 5.050; Contract Language to Assist in Placement of Displaced County Workers, Board Policy No. 5.110; Reporting of Improper Solicitations, Board Policy No. 5.060; Notice to Contract Employees of Newborn Abandonment Law (Safely Surrendered Baby Law), Board Policy No. 5.135; Contractor Employee Jury Service Program, Los Angeles County Code, Chapter 2.203; Notice to Employees regarding the Federal Income Credit (Federal Income Tax Law, Internal Revenue Service Notice 1015); Contractor Responsibility and Debarment, Los Angeles County Code, Chapter 2.202; the Los Angeles County's Child Support Compliance Program, Los Angeles County Code, Chapter 2.200; and the standard Board directed clauses that provide for contract termination and renegotiation.

IMPACT ON CURRENT SERVICES (OR PROJECTS)

Approval of the recommended actions will have no impact on current County services or projects.

The Honorable Board of Supervisors
September 20, 2011
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CONCLUSION

Please return one adopted copy of this letter to the Chief Executive Office, Capital Projects Division; Department of Parks and Recreation; and Department of Public Works, Project Management Division I.

Respectfully submitted,



WILLIAM T FUJIOKA
Chief Executive Officer

WTF:RLR:DJT
SW:VM:zu

Attachments

c: Executive Office, Board of Supervisors
County Counsel
Arts Commission
Internal Services
Parks and Recreation
Public Works

September 20, 2011

ATTACHMENT A

**DEPARTMENT OF PUBLIC WORKS:
CASTAIC SPORTS COMPLEX POOL PROJECT
ADOPT MITIGATED NEGATIVE DECLARATION AND
MITIGATION MONITORING AND REPORTING PROGRAM
AWARD DESIGN-BUILD CONTRACT
SPECS. 6996; CAPITAL PROJECT NO. 69557**

I. PROJECT SCHEDULE

Project Activity	Scheduled Completion Date	Revised Completion Date
Facility Program	09/30/09	09/30/09*
Scoping Document Contract Award	07/20/10	07/20/10*
Prequalify Design-Builders	10/30/10	12/21/10*
Project Scoping Documents	12/31/10	12/20/10*
Environmental Documentation	01/31/11	09/08/11*
Award Design-Build Contract	07/31/11	09/20/11
Construction Documents	01/31/12	03/29/12
Jurisdictional Approvals	04/30/12	06/30/12
Construction Start	05/01/12	03/01/12
Substantial Completion	10/31/13	03/31/13
Final Acceptance	12/31/13	03/31/14**

* Actual Completion Date.

** Includes time required after beneficial occupancy to achieve certain United States Green Building Council LEED credits and obtain United States Green Building Council LEED certification for project acceptance.

II. PROJECT BUDGET SUMMARY

Project Activity	Board Approved Project Budget	Impact of This Action	Revised Project Budget
Land Acquisition	\$ 0	\$ 0	\$ 0
Construction			
Design-Build Contract	\$ 9,220,000	\$171,222	\$ 9,391,222
Design Completion Allowance	0	190,778	190,778
Change Orders	920,000	(77,000)	843,000
Underground Pipeline Removal	90,000	(90,000)	0
Telecomm Equip – Affixed to Building	50,000	0	50,000
Civic Arts	95,000	5,000	100,000
Other: Utility Connections	85,000	(30,000)	55,000
Other: Stipend for the 2nd and 3rd Design-Build Proposers	80,000	(80,000)	0
Subtotal	\$10,540,000	\$ 90,000	\$10,630,000
Programming/Development	\$ 67,000	\$ 0	\$ 67,000
Plans and Specifications (scoping documents and support)	\$ 246,000	\$ 0	\$ 246,000
Consultant Services			
Hazardous Materials	\$ 10,000	\$ (10,000)	\$ 0
Geotechnical/Soils Report, Soil Testing, and Inspection	100,000	0	100,000
Material Testing	90,000	0	90,000
Cost Estimating	20,000	(20,000)	0
Topographic Surveys	20,000	0	20,000
Environmental	115,000	(52,000)	63,000
Other: Geophysical Survey and Potholing	33,000	0	33,000
Other: Hydrology Study	15,000	0	15,000
Other: CEQA Mitigation Monitoring	30,000	35,000	65,000
Other: Commissioning	30,000	(7,000)	23,000
Other: Gordian Group	3,000	0	3,000
Other: Labor Compliance Program	0	60,000	60,000
Subtotal	\$ 466,000	\$ 6,000	\$ 472,000
Miscellaneous Expenditures	\$ 21,000	\$ (6,000)	\$ 15,000
Jurisdictional Review/Plan Check/Permit	\$ 69,000	\$ 0	\$ 69,000
County Services			
Code Compliance and Quality Control Inspections	\$ 334,000	\$ (30,000)	\$ 304,000
Design Review	71,000	(30,000)	41,000
Contract Administration	170,000	(30,000)	140,000
Project Management	896,000	0	896,000
ISD ITS Communications	20,000	0	20,000
Project Technical Support	85,000	0	85,000
Office of Affirmative Action	15,000	0	15,000
Subtotal	\$ 1,591,000	\$ (90,000)	\$ 1,501,000
TOTAL	\$13,000,000	\$ 0	\$13,000,000

September 20, 2011

ATTACHMENT B

**DEPARTMENT OF PUBLIC WORKS:
CASTAIC SPORTS COMPLEX POOL PROJECT
ADOPT MITIGATED NEGATIVE DECLARATION AND
MITIGATION MONITORING AND REPORTING PROGRAM
AWARD DESIGN-BUILD CONTRACT
SPECS. 6996; CAPITAL PROJECT NO. 69557**

DESIGN-BUILD PROPOSAL SUMMARY AND RANKING

Proposer	Best Value Score (Max. Score = 1,000)	Base Price Proposal	Alternate 1	Alternate 2
Perera	855.75	\$ 8,550,000	\$62,700	\$872,000
C.W. Driver	849.50	\$ 8,243,344	\$30,500	\$487,390
Tilden Coil Constructors	807.25	\$10,249,429	\$34,500	\$715,258

Alternate 1: United States Green Building Council LEED Certified level certification for the project base scope.

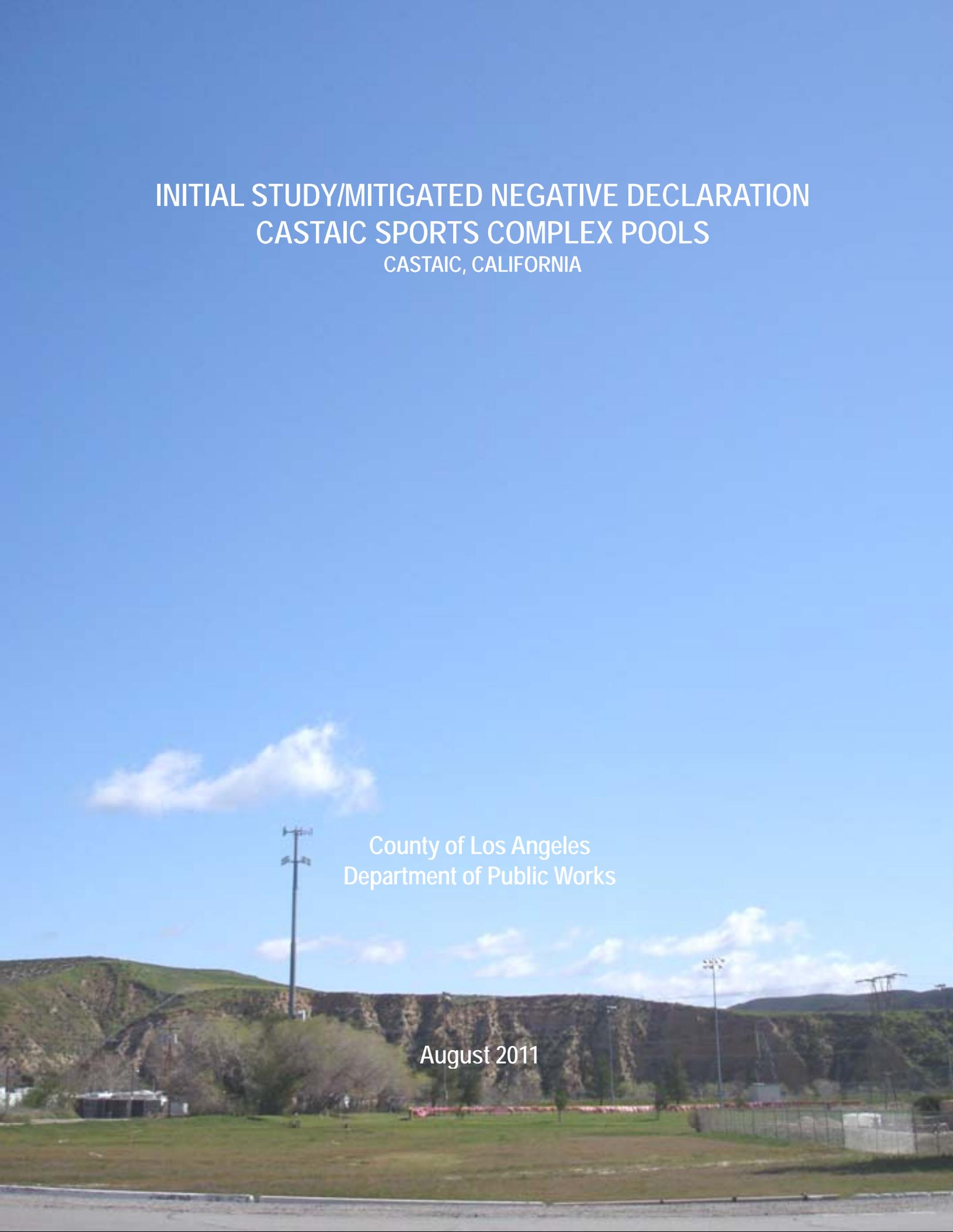
Alternate 2: Shell extension of pool building and the United States Green Building Council LEED Silver level certification for the project.

September 20, 2011

ATTACHMENT C

**DEPARTMENT OF PUBLIC WORKS:
CASTAIC SPORTS COMPLEX POOL PROJECT
ADOPT MITIGATED NEGATIVE DECLARATION AND
MITIGATION MONITORING AND REPORTING PROGRAM
AWARD DESIGN-BUILD CONTRACT
SPECS. 6996; CAPITAL PROJECT NO. 69557**

**MITAGATED NEGATIVE DECLARATION
(See Enclosure)**



INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
CASTAIC SPORTS COMPLEX POOLS
CASTAIC, CALIFORNIA

County of Los Angeles
Department of Public Works

August 2011

**INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
CASTAIC SPORTS COMPLEX POOLS**

CASTAIC, CALIFORNIA



Prepared for
County of Los Angeles
Department of Public Works
900 S. Fremont Ave., 5th Floor
Alhambra, California 91803

Prepared by
PARSONS
100 W. Walnut Street
Pasadena, California 91124

August 2011

**COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS**

CASTAIC SPORTS COMPLEX POOLS

FINAL INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

The Draft Initial Study/Mitigated Negative Declaration (Draft IS/MND) dated May 2011 for the Castaic Sports Complex Pools project was circulated for public review by the County of Los Angeles Department of Public Works between May 13, 2011 and June 20, 2011. During this review period, four comment letters were received from public agencies and no comment letters were received from private citizens or interested groups. All letters received and responses to comments are included in Appendix F (*Public Review of the Draft Initial Study/Mitigated Negative Declaration*). In response to comments, revisions have been made to the text of the Draft IS/MND as noted herein. None of the significance determinations have been changed since circulation of the Draft IS/MND (with the exception of one determination that adds a new mitigation measure). No substantial changes to the Draft IS/MND have been made. Changes to the Draft IS/MND include:

- (1.) Figures 3, 4, 5 and 7 in Section 1 have been revised to reflect the currently selected design layout of the pool complex. While these figures replace previous diagrams of the preliminary conceptual site layout, the components of the proposed project have not substantially changed from information included in the Draft IS/MND.
- (2.) Section 1.13, *Related Projects* has been updated to indicate that the Lake View Estates housing project has been approved by the County of Los Angeles Board of Supervisors.
- (3.) Section 1.15, *Other Agencies Whose approval is Required* has been revised to reflect the need for an Industrial Waste Permit and Standard Urban Stormwater Mitigation Plan Permit.
- (4.) In response to a comment from the California Department of Fish and Game, additional information on migratory birds has been added to Section 2.IV(d). As a precaution, the following new mitigation measure to conduct a nesting bird survey prior to construction has been added:

Any vegetation removal that occurs between February 1 and September 1 will require a pre-construction nesting bird survey. Any active nests should be avoided and provided with a minimum 500 ft buffer or as determined by a biological monitor in coordination with the California Department of Fish and Game.
- (5.) Section 2.XVII.d and e, *Utilities and Service Systems*, water supply will be provided by the Newhall County Water District. Additional information has been added on sewers that will serve the project.

The aforementioned changes have been incorporated directly into the Final IS/MND. These changes to the document are not considered to be substantial revisions to the IS/MND pursuant to CEQA Guidelines Section 15073.5. New information added to the IS/MND clarifies previous information and all modifications are considered to be minor. None of these changes have resulted in any change to CEQA findings or in the severity of a previously identified impact in the Draft IS/MND. A recirculation of the document for public review is not required.

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SECTION 1. PROJECT INFORMATION

The County of Los Angeles Department of Public Works proposes to construct a new swimming pool complex on 3.5 acres of County-owned land adjacent to the existing Castaic Regional Sports Complex in Castaic, Los Angeles County, California. The California Environmental Quality Act (CEQA), as established by Public Resources Code §§ 21000 *et seq.* requires that the environmental implications of an action by a local agency be estimated and evaluated before project approval. This Initial Study and Mitigated Negative Declaration has been prepared in accordance with Section 15365 of CEQA Guidelines (14 Cal. Code Reg. 1500 *et seq.*). This Initial Study provides the assessment for a determination of whether the project may have a significant effect on the environment.

- | | |
|---|---|
| 1.1 Project Title | Castaic Sports Complex Pool |
| 1.2 Lead Agency Name and Address | County of Los Angeles
(by the Department of Public Works)
900 South Fremont Avenue, 5th Floor
Alhambra, CA 91803 |
| 1.3 Contact Person and Phone Number | Mohamed Sultan, P.E., CCM, Project Manager
(626) 300-2349 |
| 1.4 Project Location | The proposed 3.5-acre site for the Castaic pool complex is located at 31230 Castaic Road, Castaic, California 91384. The pool complex would be situated north of the existing North Agency Headquarters of the Los Angeles County Department of Parks and Recreation, and northwest of the Castaic Regional Sports Complex. The site is in an unincorporated area of Los Angeles County and is within Assessor's Parcel Nos. 2865-012-916 and 2865-012-907. Castaic is approximately 35 miles northwest of downtown Los Angeles. The proposed pool complex would be approximately 450 ft east of Interstate 5 (I-5, Golden State Freeway) (Figure 1). The pool complex would be located along North Castaic Road approximately 700 ft south of Ridge Route Road (Figure 2). |
| 1.5 Project Sponsor's Name and Address | Mohamed Sultan, P.E., CCM, Project Manager
County of Los Angeles Department of Public Works
Project Management Division I
900 S. Fremont Avenue, 5 th Floor
Alhambra, CA 91803-1331 |
| 1.6 General Plan Designation | The County of Los Angeles Department of Regional Planning designation for the proposed project site is Open Space as indicated in the Los Angeles County Department of Regional Planning, Santa Clarita Valley Area Plan, Generalized Land Use map (County of Los Angeles, 2008). |
| 1.7 Zoning | The proposed site for Castaic Pool Complex is zoned as Open Space Parks and Recreation (OS-PR) by County of Los Angeles Department of Regional Planning (2008). |

1.8 Description of the Proposed Project

The County of Los Angeles Department of Public Works proposes to construct a new swimming pool complex in the community of Castaic in an unincorporated area of Los Angeles County, California. The pool complex would be operated by the County of Los Angeles Department of Recreation and Parks. The project would be constructed in two phases.

- Phase I of the complex would include a recreational pool, shallow pool, splash pad, pool building and parking lot with a new entrance. Night lighting would be provided for the parking lot, pool building, and pool deck. The complex would be northwest of the existing Castaic Regional Sports Complex as shown on Figure 3.
- Phase II would include the addition of an Olympic-size swimming pool and a new parking lot to the east as shown on Figure 4. Construction of Phase II is contingent upon funding.

A preliminary site plan for the proposed pool complex is provided on Figure 5. Because the proposed pool complex would be constructed as a design-build project, the description contained herein represents anticipated features based on a preliminary site plan. Upon completion of design, the County of Los Angeles will determine whether any additional environmental evaluation and documentation is required under CEQA. In the event that final design of the pool complex is not consistent with the analysis in this environmental document, the County of Los Angeles will prepare additional environmental documentation in accordance with CEQA requirements.

Currently, it is expected that the proposed project (Phase I) will be funded by Park In-Lieu Fees Special Fund (Quimby) and by Enhanced Services for Unincorporated Areas (Proposition 62) funds. The second phase of the project has not yet been approved or funded.

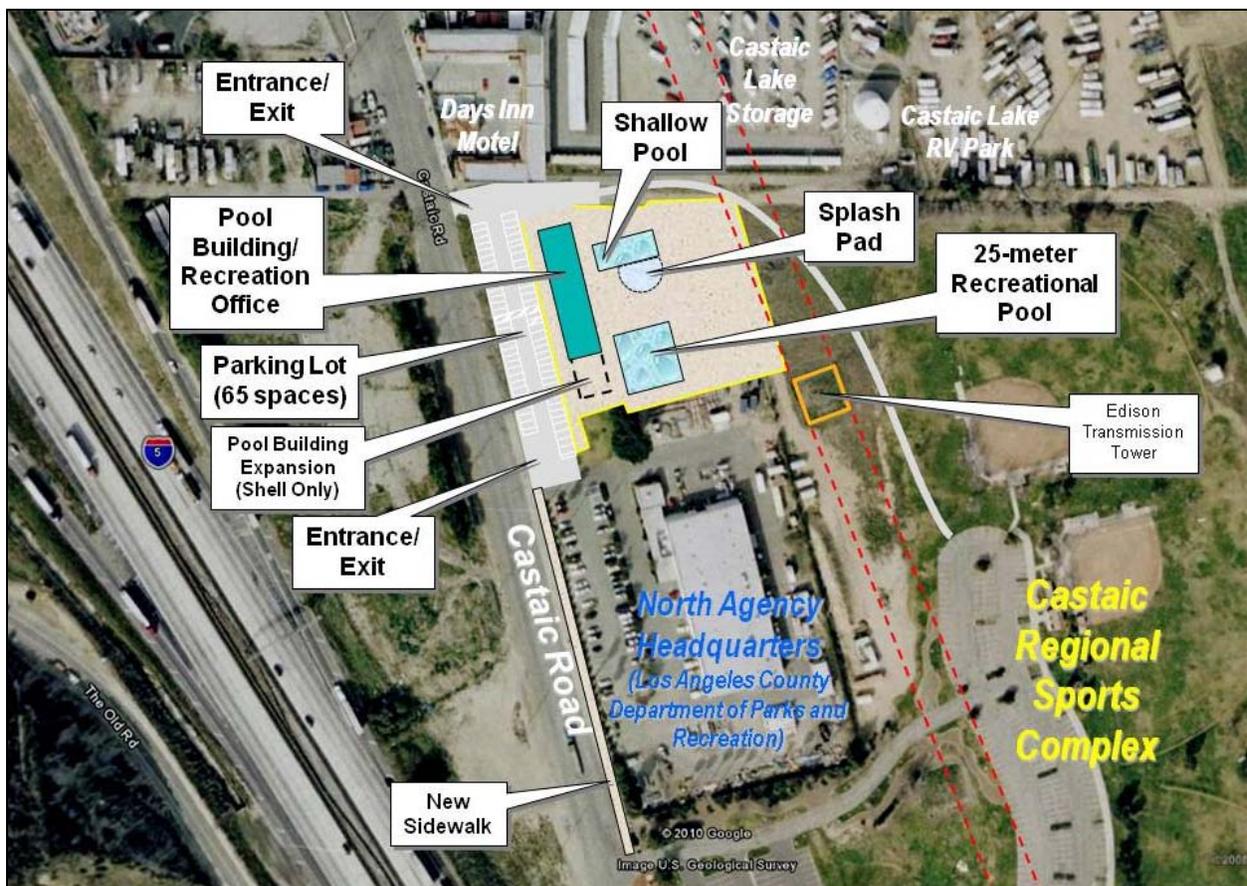


Figure 3. Preliminary Site Layout for Castaic Pool Complex (Phase 1)



Figure 4. Preliminary Site Layout for Castaic Pool Complex (Phase 2)

1.9 Background

The Castaic Regional Sports Complex is located on 51 acres of land and includes ball diamonds, picnic areas, a gymnasium and community rooms, a 12-station par/jogging course, and children's play areas. Constructed in 1993, the park features horseshoe pits, indoor basketball and volleyball, barbecues, indoor and outdoor basketball courts, kitchen, locker room with showers, comfort stations, multipurpose field, and three lighted softball fields. The Castaic Regional Sports Complex offers: day camp during the spring, summer and winter; youth flag football; youth soccer; winter and summer youth basketball; and, youth T-ball and softball. The Castaic Regional Sports Complex is open from 6:00 a.m. to 10:00 p.m. (or 8:00 a.m. to sunset at the ball fields).

The proposed pool complex would be located on approximately 3.5 acres of land northwest of the Castaic Regional Sports Complex. Elevation of the proposed pool complex site varies from 4 to 5 ft below the existing grade of Castaic Road. The proposed site for the pool complex would be on undeveloped land north of the North Agency Headquarters of the Los Angeles County Department of Parks and Recreation. The North Agency Headquarters is an administration building with storage and maintenance yards that service recreational facilities in the northern region of the County. The existing facility is enclosed by chain-link fencing and would not be connected, or accessible, to the proposed pool complex.

Underground pipelines are present beneath the proposed site for the pool complex. On the western portion of the site, there are two abandoned 10-inch diameter ExxonMobil Pipeline Company oil pipelines that were buried approximately 4 ft below the surface (Kleinfelder, 2010). These pipelines, M-70 A and M-70B, have been removed. Pipelines buried beneath the project site are shown on Figure 6.

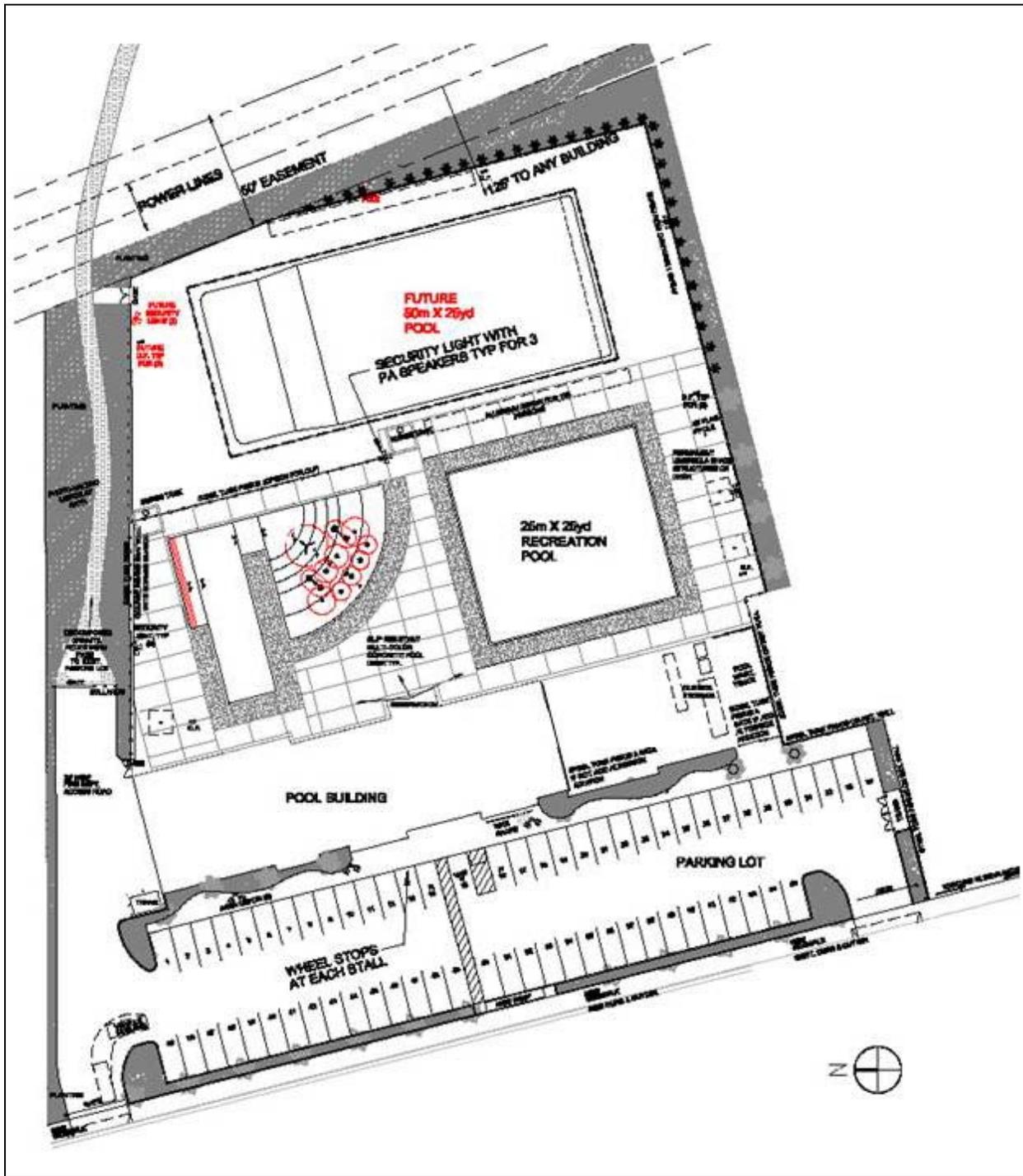


Figure 5. Preliminary Site Plan for Castaic Pool Complex

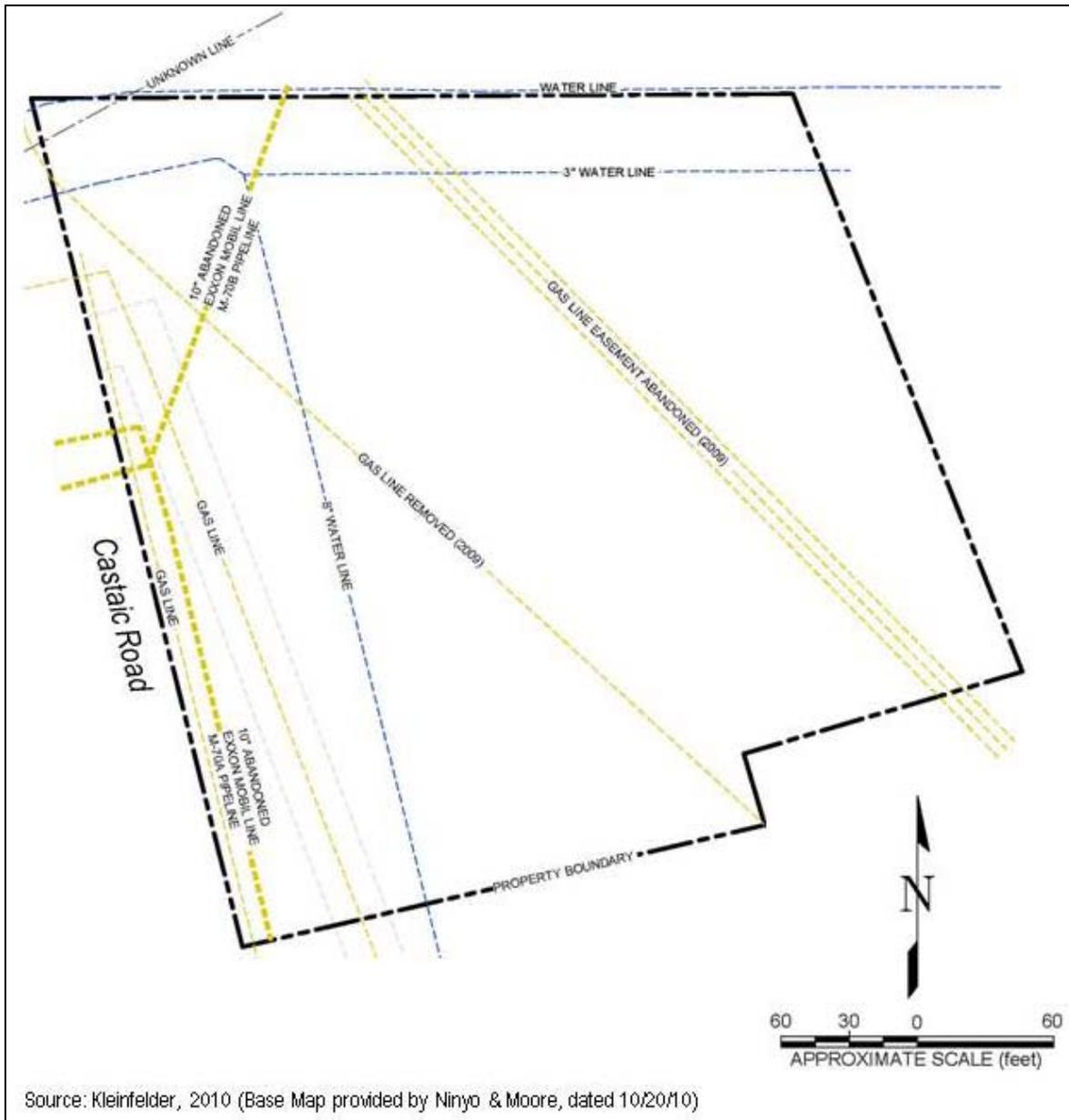


Figure 6. Pipelines Buried Beneath the Castaic Pool Complex Site

A dirt road along the northern boundary of the site (on Los Angeles County-owned property) leads to the Newhall County Water District Forebay Pump Station at 31400 North Castaic Road. The pump station is approximately 600 ft east of the project site. From Castaic Road, the dirt road is visible from the western perimeter of the site. Newhall County Water District owns the pump station north of the site as well as a water pipeline that runs east of the site. The water district has an easement from the County for ingress/egress for the water pipeline and pumping facilities.

A 50-ft wide Southern California Edison easement on Los Angeles County-owned property runs along the eastern perimeter of the site. An active transmission tower is located adjacent to the southeast corner of the site. The transmission tower is located approximately 75 ft southeast of the site. The easement for the tower extends 25 ft on either side of the transmission tower (Figure 3).

1.10 Purpose of the Project

The purpose of the project is to improve recreational and community opportunities in the County by providing a new swimming pool complex for use by the general public.

There are 27 public swimming pools throughout the County and operated by the County of Los Angeles Department of Parks and Recreation. The closest community swimming pools are: the Val Verde Community Regional Park approximately 4 miles southwest of the site; and, the Santa Clarita Aquatics Center approximately 8.3 miles southeast of the site.

1.11 Construction

The pool complex would be constructed in two phases. Construction of the first phase of the project would be approximately 20-months in duration and include:

- Construction of a 25-meter by 25-yard recreational pool and deck for competitive swim training and competition events with security fencing, pool and security lighting (including night lighting), and depths from 3.5 to 12.5 feet.
- Construction of a shallow pool (21 ft by 75 ft) with depth varying from 3 to 4 ft, and deck.
- Construction of a Splash Pad, a water interactive play area for children of all ages containing structures, 1,000 sq ft zero depth area (water surface) connected to the shallow pool.
- Construction of a one-story pool building and recreation office (12,500 sq ft in size) with lobby, staff office, lifeguard office, bag room, restrooms (including showers and changing rooms), storage, concession area and electrical room. The shell for an extension to the pool building would be constructed (this area to serve as storage). The pool equipment area would have a separate drive up access to storage areas for pool chemicals and equipment.
- Construction of a new parking lot with a driveway from Castaic Road at the northwest corner of the property. The lot would provide parking for approximately 65 cars. Castaic Road would be widened along the project frontage and would include a curb/gutter and sidewalk consistent with the road classification or future buildout.
- Construction of a decomposed granite access road along the north perimeter of the site connecting to the existing parking lot serving the northernmost ball field of the Castaic Regional Sports Complex. The County would continue to allow access to the existing pump station east of the site. The existing parking lots southeast and south of the pool complex would provide overflow parking when needed.
- Construction of a decomposed granite walking path from the existing parking lot for the ball fields to the proposed pool complex.
- In accordance with the California Solid Waste Reuse and Recycling Access Act of 1991, as amended, a storage area for collection and removal of recyclable materials would be provided at the northwest corner of the pool building.
- The area for a future Olympic-sized swimming pool would be graded and covered with gravel for weed control (this area would not be fenced; the whole complex would be fenced).

The first phase of the project would include: concrete decking; bicycle racks; steel trash receptacles; drinking water fountains; security lighting in the parking lot, northern and eastern fences of the complex and at the center of the pool deck; drain lines (with system backwash) that would drain into the sanitary sewers; security fencing; landscaping with drought-tolerant vegetation; an automatic irrigation system for landscaped areas and tree wells; drainage improvements; sidewalks; signage; and, the installation of electrical, water and communication lines.

The pool complex would be designed to incorporate Low Impact Design (LID) features in accordance with standards described in Chapter 84 of Title 12 (Environmental Protection) of the Los Angeles County Code. Walkways, access and parking would be designed and constructed in compliance with Americans

with Disability Act (ADA) requirements. Lifeguard towers and heated pool water would be provided for each swimming area.

Phase 1. The first phase of the construction would require:

- Demolition and site clearing of a portion of the northern periphery of the North Agency Headquarters including some area inside and outside the existing fence (Figure 5). This area is used for materials storage of park equipment and borrow soils. Removal of vegetation and trees inside the fence at the northwest corner of the North Agency Headquarters.
- Site preparation would include clearing and grading for placement of the parking lot, drainage improvements, concrete decking, and walkways. Approximately 250 ft of an abandoned 10-inch diameter oil pipeline and portions of two 3-inch and 8-inch water pipelines that run across the site have been removed. An abandoned 24-inch gas pipeline at the site was removed and backfilled (Southwest Geotechnical, Inc. 2009).
- It is estimated that the project would result in the need for approximately 3,075 cubic yards (cy) of soil to be cut, approximately 10,760 cy of soil to be filled, and approximately 7,700 cy of soil to be imported to the site. With the exception of oversized material (rocks, boulders or debris greater than 3 inches in diameter) or soil containing vegetation, no material would be removed from the site. The maximum depth of excavation would be approximately 9 ft below existing grade for Phase 1 construction; and, approximately 14 ft below existing grade for Phase 2 construction. The site would be overexcavated, filled using existing soil from the site, and recompacted. The pool deck would be constructed on fill material.
- Trenching for new utilities to be constructed would include: sanitary sewer and storm drain connections; new electrical circuits for area and security lighting; and, water lines for a drinking water and irrigation system.
- Asphalt and concrete paving (parking areas, drainage improvements, curbs and concrete decking) would cover most of the 3.5 acres of the complex. Porous asphalt concrete may be used in limited areas in accordance with LID requirements.
- Landscaping would include planting of drought-tolerant trees and shrubs around the complex, parking lot and walkways as shown in Figure 4 (preliminary site layout). An automatic irrigation system for landscaped areas and tree wells would also be provided.
- The pool complex would be accessed by either of two entrances along Castaic Road. Driveways would provide two-way access into a dedicated parking lot with a turnaround area. A total of approximately 65 parking spaces, including three (3) ADA-compliant spaces and a ramp, would be constructed.
- Roadway modifications and improvements to provide safe access into the pool complex from Castaic Road will be included in accordance with County of Los Angeles Department of Public Works and Department of Regional Planning requirements. A sidewalk will be constructed in front of the North Agency Headquarters building to allow pedestrians to travel from the pool complex to the Castaic Regional Sports Complex via Castaic Road.
- Offsite improvements to the North Agency Headquarters will include: curb, gutter, sidewalk, curb cuts, driveway aprons, roadway widening and street lighting in front of the pool complex; relocation or removal and replacement of the existing pole and guy wire near the north end of the site; removal and replacement of the existing drive apron, a portion of the driveway, and reconfiguration of the gate and fence at the north entrance of the North Agency Headquarters; relocation or removal and replacement of utility devices within the right of way; and, relocation of signs.

While some temporary detours may be required, closures of entire roads would not be expected during the construction period. Construction vehicles and equipment would be staged onsite. Construction of the first phase of the pool complex is expected to initiate in early 2012.

Phase 2. The second phase of construction would be approximately 15 months in duration and include:

- Construction of a 50-meter Olympic-size swimming pool with improvements to accommodate competitive swimming, diving and water polo training. ADA-compliant bleachers for approximately 175 patrons would be provided.
- Construction of a new paved parking lot east of the pool complex (Figure 4) to include for approximately 150 vehicles. Design of the parking lot will exclude area within the transmission line easement and will be subject to review and approval by Southern California Edison.
- Reconfiguration of the decomposed granite walking path from the existing parking lot for the ball fields to provide access to the proposed pool complex from the new parking lot.
- Removal of up to eight trees on the adjacent North Agency Headquarters property depending on final design and for safety reasons, if required.

The start of the second phase of the pool complex would be determined contingent upon available funding. For evaluation purposes only, construction of the second phase of the pool complex was assumed to start in mid-2013.

1.12 Operation

The Castaic Pool Complex would be owned by the County of Los Angeles and operated by the County of Los Angeles Department of Parks and Recreation. The complex would be open from 8:00 a.m. to 8:00 p.m. seven days per week. Scheduled night swimming until 8:00 p.m. will be allowed. During special events and rentals (i.e., private parties), hours would be from 6:00 a.m. to 10:00 p.m. Hours may vary depending on community use and program scheduling.

Occupancy of the proposed pool complex will be determined by the scheduling of daily activities. The number of persons that could be present at the complex can be viewed in terms of an estimated attendance and the maximum capacity. The following assumptions were used to determine the estimated attendance for each phase of the proposed pool complex:

- Average attendance was projected by the Los Angeles County Department of Parks and Recreation based on historical use of the Santa Clarita Aquatics Center, which is a similar in size and structures.
- Phase 1 attendance is estimated to be 70 percent of Phase 2 attendance.
- Phase 1 operations would not include scheduling of any special events (such as parties or facility rental) at the pool complex. Special events would be scheduled as part of Phase 2 operations.
- An estimated 2.5 spectators would be present per swimmer (i.e., the average vehicle would contain 2.5 persons).
- Scheduling of classes, class size and staffing would preclude pools from continuously operating at maximum capacity.

Phase 1. The first phase of the pool complex would operate with three pools. The estimated daily number of persons at the proposed Phase 1 pool complex is shown on Table 1.

Table 1. Estimated Use of the Phase 1 Pool Complex

Pool	Maximum Pool Capacity ^a	Estimated Maximum Daily Swimmers and Visitors ^b	Workers ^c	Max. Persons Per Day
Recreational	308	--	--	--
Shallow	79			
Splash Pad	50			
Total, Phase 1 (off season)	436	140	6	146
Total, Phase 1 (summer)	436	280	8	288

- ^a Based on code requirement for 20 sq ft of pool surface per swimmer. This number reflects the maximum number of swimmers that will be allowed in the pool at one time.
- ^b As estimated by the Los Angeles County Department of Parks and Recreation, these numbers are based on an estimated 70 percent of the historic attendance at the Santa Clarita Aquatics Center which has one-25 yd and one 50-m pool. These numbers reflect swimmers and visitors.
- ^c Includes lifeguards, administrative and maintenance workers.

Access to the Phase 1 pool complex would be from two new driveways along Castaic Road north of the entrance to the North Agency Headquarters facility and Castaic Regional Sports Complex. Based on the estimated attendance for the Phase 1 pool complex, the proposed 65-car parking lot would be adequate. In the event additional parking is required during operation of the Phase 1 complex, overflow parking would be available in two of the existing parking lots for the Castaic Regional Sports Complex (Figure 7).



Figure 7. Overflow Parking for the Phase 1 of the Proposed Castaic Pool Complex

Phase 2. The second phase of the pool complex would operate with an Olympic-sized pool in addition to the three pools constructed for Phase 1. Phase 2 operations would include scheduling of special events (such as parties or facility rental) at the pool complex. The estimated maximum number of persons at the proposed pool complex is shown on Table 2.

Table 2. Estimated Use of the Phase 2 Pool Complex

Pool	Maximum Pool Capacity ^a	Estimated Maximum Daily Swimmers and Visitors	Workers ^b	Max. Persons Per Day
Olympic-sized Pool	615	--	--	--
Phase 1 Pools (see Table 1)	436	--	--	--
Total, Phase 2 (off season)	1,051	200 ^c	6	206
Total, Phase 2 (summer)	1,051	750 ^d	8	758
Total, Phase 2 Pools – Special Event	1,051	750 ^e	8	758

^a Based on code requirement for 20 sq ft of pool surface per swimmer. This number reflects the maximum number of swimmers that will be allowed in the pool at one time.

^b Includes lifeguards, administrative and maintenance workers.

^c As estimated by the Los Angeles County Department of Parks and Recreation, this number is based on historic attendance at the Santa Clarita Aquatics Center which has one-25 yd and one 50-m pool.

These numbers reflect swimmers and visitors.

^d As estimated by the Los Angeles County Department of Parks and Recreation, this number reflects the estimated summer season attendance.

^e As estimated by the Los Angeles County Department of Parks and Recreation, this number reflects the estimated special event attendance (same as summer season attendance).

Access to the Phase 2 pool complex would continue to be from two driveways along Castaic Road north of the entrance to the North Agency Headquarters facility and Castaic Regional Sports Complex. As shown on Figure 4, a new 150-vehicle parking lot would be constructed east of the pool complex as part of Phase 2 (see Figure 4). Based on the estimated attendance for the Phase 2 pool complex, the 65-car parking lot would be adequate. In the event additional parking is required during operation of the Phase 1 complex, overflow parking would be available in two of the existing parking lots for the Castaic Regional Sports Complex (Figure 7).

1.13 Related Projects

There is one known project within one mile¹ of the proposed Castaic Sports Complex Pools site. Lake View Estates (Tract 53933) was approved by the Los Angeles County Board of Supervisors on April 26, 2011. Located on the west side of I-5 approximately 1,050 ft southwest of the proposed site for the pool complex, the project would allow development of about 70,000 square feet of business/office park uses on three lots, 70 single-family residences, four open space lots, a detention basin, and a park. The estimated 20-month construction period could initiate in 2011 depending on market conditions. There may be a 4-month period of time when Lake View Estates housing construction could overlap with construction of Phase 1 of the proposed project. For purpose of this evaluation, it is assumed that the above project could contribute cumulative impacts to either the construction or operation of the proposed pool complex.

1.14 Surrounding Land Uses and Setting

The site for the proposed pool complex is surrounded by commercial and manufacturing areas to the north, recreational open space to the east and southeast, public uses to the south, and a roadway and open space to the west (see Figure 2). Surrounding land uses are summarized in Table 3. Surrounding land uses are shown on Figures 2 and 3.

¹ A distance of one mile was selected because it represents a reasonable area in which environmental impacts of the proposed project, when combined with other projects, could be expected for a project of this type.

Table 3. Land Uses Surrounding the Project Site

Direction	Approximate Distance from Project Site	Land Use
North	50 ft north	Days Inn Motel
	50 ft north	Castaic Lake Storage
	250 ft northeast	Castaic Lake RV Park
	125 ft northwest	(boat repair shop)
East	250 ft east	Castaic Sports Complex (Ballfields and Open Turf), Southern California Edison transmission lines
	95 ft southeast	Southern California Edison Transmission Tower
	1,300 ft east	Castaic Creek
South	135 ft south	County of Los Angeles Department of Parks and Recreation - North Agency Headquarters
West	50 ft west	Castaic Road

1.15 Other Agencies Whose Approval is Required

In addition to Los Angeles County review and approval, the project will be required to obtain:

- Coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit issued by the State Regional Water Quality Control Board (RWQCB);
- A Standard Urban Stormwater Mitigation Plan Permit from the State Water Resources Control Board to treat or retain stormwater runoff;
- Trunk Sewer Connection Permit issued by the County Sanitation District; and,
- A joint Industrial Waste Discharge Permit from the County Sanitation District and Los Angeles County Department of Public Works.

Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following page.

- | | | |
|---|--|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology /Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology /Water Quality |
| <input type="checkbox"/> Land Use /Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population /Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation /Traffic | <input type="checkbox"/> Utilities /Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |

Determination: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Mohamed Sultan, P.E., CCM

Printed Name

County of Los Angeles
Department of Public Works

For

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance

SECTION 2. CEQA ENVIRONMENTAL CHECKLIST

The Environmental Checklist and discussion of potential environmental effects were completed in accordance with Section 15063(d)3 of the California Environmental Quality Act Guidelines to determine if the proposed project may have any significant impacts on the environment.

A brief explanation is provided for all determinations. A “No Impact” or “Less Than Significant Impact” determination is made when the project would not have any impact or would not have a significant effect on the environment for that issue area, respectively, based on a project-specific analysis

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics Would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	

Scenic resources in the Santa Clarita Valley, as described in the Santa Clarita Valley Area Plan (County of Los Angeles, 2009a) include scenic mountains, canyons, woodlands and water bodies. Well-defined ridgelines, slopes and canyons provide a visual backdrop to the urban environment, creating a sense of place for each neighborhood and allow opportunities for residents to experience the natural environment (County of Los Angeles, 2009). The nearest scenic resources to the site are ridgelines in surrounding mountains east of Castaic Creek. The ridgeline (approximately 1,800 ft east of the site) that would serve as the visual backdrop of the proposed pool complex is considered a scenic resource in the Santa Clarita Valley. While visible from the project site, this scenic resource is already obscured (but not obstructed) by the existing power transmission line and ball field cages when viewed to the east. The proposed pool complex would include a one-story pool building (approximately 200 ft wide by 35 ft high³) which may be visible from Interstate-5. The proposed building would not obstruct the scenic view of the ridgeline east of the site.

The proposed pool complex would not be visible from any scenic vistas in the area. The proposed pool complex would be a new visual element in the area with limited visibility from surrounding areas because of existing terrain. The proposed pool complex would be visible from the closest viewers at the adjacent motel, RV park and North Agency Headquarters. The proposed pool complex would not obstruct views of the mountains or ridgelines in the area for any of the adjacent viewers. The existing ridgeline east of Castaic Creek would continue to be fully visible from Castaic Road and I-5. The effect of the proposed project on scenic vistas would be considered less than significant.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
--	--	--	--	---

There are no official State or County Scenic Highways in the project area. Although the proposed pool complex would be visible in the local area and from Interstate 5, there would be no substantial damage to scenic resources within a state scenic highway. This segment of Interstate 5 is not a designated scenic highway. The nearest State scenic highway is a segment of State Route 2 (Angeles Crest Highway) from 2.7 miles north of State Route 210 at La Canada to the San Bernardino County line. This 55-mile segment of state scenic highway is approximately 30 miles southeast, and not visible from, the proposed

³ Note that building dimensions may vary as a result of the design-build process. The height of the proposed pool building could be up to two-stories.

site. Removal of trees and vegetation at the northwest corner of the North Agency Headquarters would not damage scenic resources. Up to eight of the existing mature trees within the North Agency Headquarters may require removal. Removal of these trees at this location, if required by design or for safety reasons, would not substantially damage scenic resources. None of the existing, planted trees are native species nor do they contribute substantially to the scenic resources of the site or surrounding area. There would be no net loss of trees because new trees would be planted for the Phase I project. Therefore, there would be no impacts to scenic resources from the proposed project.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X	

The visual character of the project site is open space with surrounding commercial, recreational and open space land uses. The visual field encompasses an urbanized recreational area within 50 ft of a commercial area, and is composed of natural features including a backdrop of rolling hills to the east. This view contains developed structures including a two-story motel, storage yard and RV park immediately north of the site (Figure 8). Fenced County of Los Angeles property used for offices, maintenance and storage is located directly south of the site. The existing view of the ridgeline east of the site is partially obscured by a cell tower, transmission lines and recreational lighting (Figure 5). The proposed pool complex would not alter the view of the existing ridgeline east of the site because the ridgeline would continue to be fully visible from Castaic Road.



Figure 8. View of Existing Site for Proposed Pool Complex Along Castaic Road (Looking Northeast)

The pool complex would become a permanent visible aspect as seen when looking to the northeast from Castaic Road (Figure 9). The view of the hills east of the site would not be obscured by the proposed one-story pool building (this view is already obscured by the transmission line and other existing features). A vacant lot is directly west of the site. The view of the hills from the vacant lot would not become partially obscured by the proposed pool building. This visual change would not be considered a substantial degradation of the visual quality of the area. This is because the site is in a transitional area

between existing commercial, recreational and institutional land uses. The proposed project would be surrounded by a motel, RV storage, ballfields and the Los Angeles County North Agency Headquarters office building and maintenance yard. The site would also be across the street from vacant land that is zoned for industrial uses.

Construction of the pool complex may include removal of up to eight trees in the picnic area of the North Agency Headquarters. These trees do not contribute to the visual quality or character of the area. Removal of these pines would not be considered degradation of the visual character of the site or surrounding area because they do not contribute to any scenic views.



Figure 9. View of Existing Site for Proposed Pool Complex Along Castaic Road (Looking Northeast)

Based on the above, the proposed project would not adversely impact the visual character and quality of the project area. The proposed project would not substantially degrade the visual character of the site and its surroundings. Impacts to the visual character and quality of the area would be considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?			X	

The existing site does not contain any artificial lighting. The Castaic Sports Complex has lighting for ball fields east of the site (this lighting does not carry over onto the site because fixtures are directed inward onto the ball fields). Castaic Road does not have street lights immediately in front of the site, but contains street lighting in the commercial area north of the site. The surrounding area is characterized by typical urban and commercial sources of light and glare. Construction activities for the proposed project would occur during daylight hours; therefore, no new sources of artificial lighting would be necessary during construction of the pool complex.

The proposed pool complex would include artificial lighting of the parking lot, pool building and pool decks. Security lighting would be on from 8:00 p.m. to 6:00 a.m. (when the park is closed); nighttime lighting would vary depending on the season and scheduling of activities at the pool complex. Security lighting would be directed downward and towards the interior of the complex. Artificial lighting would not emanate out from the pool complex because lighting would be directed inward towards the pool deck. The pool complex would not be constructed with the use of any reflective materials, and would not be expected to generate a substantial amount of light or glare in the surrounding community. Therefore, impacts from light and glare would be considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>II. Agriculture and Forest Resources</p> <p>In determining whether impacts to agriculture resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.</p> <p>Would the project:</p>				
<p>a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</p>				X

The State of California Department of Conservation Division of Land Resources has surveyed land in Southern California as part of its Farmland Mapping and Monitoring Program (FMMP). The FMMP Geographic Information System (GIS) data shows that the project site is classified as Urban and Built-Up Land and does not contain farmland of unique or local importance (FMMP, 2008). The site does not contain soils with agricultural ratings that would qualify as Prime Farmlands. The proposed project would not result in the conversion of farmland to non-agricultural use. Impacts to farmland would not occur.

<p>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</p>				X
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Williamson Act contracts are applicable to land in agricultural preserves and restrict specific parcels of land to agriculture or related open space use. The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use.

In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value. Local governments receive an annual subvention of forgone property tax revenues from the state via the Open Space Subvention Act of 1971 (State of California, 2010). There are no Williamson Act contracts in effect in Los Angeles County or for the project site. No portion of the site is zoned for agricultural use. Therefore, the proposed project will not result in any impacts to existing zoning or Williamson Act contracts.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X

The proposed project would consist of a new pool complex on vacant land that is currently zoned as Open Space - Parks and Recreation. There is no land within the boundaries of the proposed pool complex that is currently used as forest land, timberland or timberland production. Therefore, the proposed project would not result in the conflict with existing zoning or cause rezoning of any forest land. Impacts to forest land or timberland would not occur.

d) Result in the loss of forest land or conversion of forest land into non-forest use?				X
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The proposed project is not located on any forest land. The project would not result in the loss of any forest land nor would it result in the conversion of any forest land into non-forest use. Therefore, there would be no impact to forest land.

e) Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X
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The proposed project would consist of a new swimming pool complex on vacant land. There is no land within the boundaries of the proposed pool complex that is currently used as farmland or forest land. Therefore, the proposed project would not result in the conversion of farmland into a non-agricultural use or conversion of forest land into non-forest use. Impacts to farmland and forest land would not occur.

III. Air Quality Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	

The project area is located in the South Coast Air Basin and managed by the South Air Quality Management District (SCAQMD). The SCAQMD is required, pursuant to the Clean Air Act of 1988, to reduce emissions of criteria pollutants for which the basin is in non-attainment. Strategies to achieve these emissions reductions are included in the SCAQMD Air Quality Management Plan (AQMP) for the region. The AQMP is based on Southern California Association of Governments (SCAG) population projections for communities within the Basin. Conformance with the AQMP for future development

projects is determined by demonstrating compliance with local land use plans and/or population projections. The proposed pool complex would not conflict or obstruct implementation of the AQMP. The proposed pool complex would be constructed in order to provide a recreational opportunity to the local public and would be designed to accommodate projected population increases in the area. The project would be designed to reduce vehicle miles traveled by the public to other aquatic centers that are located farther from residential areas. As such, the project would meet goals and objectives of the AQMP by minimizing vehicle miles traveled for recreation, which consequently minimizes air pollutant emissions. Therefore, the project is in compliance with goals and objectives of the AQMP and impacts would be less than significant.

The proposed project will result in temporary air pollutant emissions during the first phase of construction with installation of utilities and construction of the parking lot, pool building, pools and deck. Heavy equipment that could likely be used during the construction period include: concrete/industrial saw, bulldozer, tractor/loader/backhoe, grader, paver, roller, cement and mortar mixer, crane, forklift and water truck. Temporary air pollutant emissions would also be generated during the second phase construction of the Olympic-sized pool. Heavy equipment that would likely be used would be similar to equipment for the first phase of construction and was estimated based on construction of similar projects of this size and type. Table 4 provides a summary of estimated daily air pollutant emissions.

Table 4. Estimated Air Pollutant Emissions from Proposed Construction of Castaic Pool Complex

Phase	Estimated Duration	Activity	Emissions (lb/day) ^a					
			CO	ROG	NOX	SOX	PM ₁₀	PM _{2.5}
1	20 months	Installation of Utilities, Construction of Parking Lot, Pool Building, Pools and Deck	11.46	2.41	19.84	0.00	19.38	4.74
		SCAQMD Significance Threshold ^b	550.00	75.00	100.00	150.00	150.00	55.00
		Exceed Threshold?	No	No	No	No	No	No
<i>Heavy equipment that likely could be used during Phase 1 is as follows: 1 bulldozer, 2 tractor/loader/backhoes, 1 concrete industrial saw during site preparation; 1 bulldozer, 2 graders, 1 tractor/loader/backhoe, 1 water truck during grading; 1 trenching machine, 1 tractor/loader/backhoe and 1 water truck during trenching; 2 cement/mortar mixers, 1 forklift, 1 generator set, 1 tractor/loader/backhoe, 2 welders during building construction; and, 2 cement/mortar mixer, 1 paver, 1 paving equipment, 1 roller and 1 tractor/loader/backhoe during asphalt/concrete paving.</i>								
2	15 months	Construction of Olympic Pool	5.16	1.13	7.46	0.00	0.40	0.37
		SCAQMD Significance Threshold ^b	550.00	75.00	100.00	150.00	150.00	55.00
		Exceed Threshold?	No	No	No	No	No	No
<i>Heavy equipment that likely could be used during Phase 2 is as follows: 2 excavators, 1 tractor/loader/backhoe and 1 water truck during site preparation; 1 crane, 1 forklift, 1 tractor/loader/backhoe and 1 water truck during building construction; and, 2 cement/mortar mixers, 1 paver and 1 roller during asphalt/concrete paving.</i>								

Note: No overlap of Phase 1 construction with Phase 2 construction is anticipated.

^a Source: URBEMIS model output for a 3.5-acre park.

^b Source: SCAQMD, 2008

CO = carbon monoxide

SO_x = sulfur oxides

ROG = reactive organic gases

PM₁₀ = particulate matter less than or equal to 10 microns in diameter

NO_x = nitrogen oxides

PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter

For Phase 1 construction of the proposed pool complex, these emissions incorporate activities associated with site preparation/demolition, grading, trenching, asphalt/concrete paving, building construction and architectural coatings (assumptions for equipment are shown on Table 4). Emissions shown reflect the estimated six truck trips required for import of soil to the site. For Phase 2 construction, emissions on Table 4 reflect excavation, asphalt/concrete paving, and architectural coatings (assumptions for equipment are shown on Table 4). The values on Table 4 reflect the maximum daily (mitigated) emissions based on a mix of typical construction equipment in use at the site for each stage of

construction. Dust and exhaust emissions are reflected in particulate matter emission rates. These emissions would be less than SCAQMD significance thresholds. Construction-related air pollutant emissions will not result in any conflict with objectives or implementation of the SCAQMD AQMP. Impacts to air quality from construction are considered to be less than significant.

Air pollutant emissions are also generated from by construction worker vehicles (one vehicle per construction worker, approximately 20 construction workers per day for each phase) and are reflected in the values shown on Table 4. These emissions will not exceed SCAQMD localized significance thresholds. Construction activities will be short term and will not be expected to result in any adverse, short- or long-term effects on air quality because the generation of air pollutants will be limited to the 20- and 15-month construction periods associated with Phases 1 and 2, respectively. Impacts to air quality from construction of the proposed project will be considered less than significant.

Once construction of the pool complex is completed, operational emissions would consist primarily of vehicular emissions from visitors, employees and maintenance personnel. Table 5 provides a summary of estimated air pollutant emissions during operation of the pool complex. The values on this table reflect the maximum daily (mitigated) emissions associated with operation of the pool complex. Table 5 displays estimated Phase 2 emissions from operation of the pool complex on a typical day in contrast to a day with higher attendance at a competition event held in the Olympic-sized pool. Operational emissions would not exceed SCAQMD significance thresholds. For these reasons, impacts to air quality associated with operation of the proposed pool complex would be considered less than significant.

Table 5. Estimated Air Pollutant Emissions from Operation of Castaic Pool Complex

Source	Emissions (lb/day) ^a					
	CO	ROG	NOX	SOX	PM ₁₀	PM _{2.5}
Phase 1 Pool Complex - Utilities, Parking Lot, Pool Building, Pools and Deck	13.89	1.24	1.46	0.01	2.04	0.41
SCAQMD Significance Threshold ^b	550	55	55	150	150	55
Exceed Threshold?	No	No	No	No	No	No
Phase 2 Pool Complex - Olympic Pool (Typical Operations)	19.84	1.77	2.08	0.02	2.91	0.58
Phase 2 Pool Complex – Olympic Pool (Special Event)	38.11	3.41	4.13	0.03	5.82	1.14
SCAQMD Significance Threshold ^b	550	55	55	150	150	55
Exceed Threshold?	No	No	No	No	No	No

Notes: 1. Phase 1 values include emissions from 490 vehicle trips per day as based on information provided by the County of Los Angeles.

2. Phase 2 values include emissions from 750 vehicle trips per day for typical operations (i.e., no competition events) and special events (e.g., swim meet or pool rental) as based on information provided by the County of Los Angeles.

^a Source: URBEMIS model output for 3.5-acre park.

^b Source: SCAQMD, 2008

No mitigation measures are required because impacts to air quality are not considered significant. To prevent and reduce future air pollutant emissions, the proposed project will include the following mitigation measures during the construction period:

- **Air 1.** Emissions of particulate matter will be reduced by approximately 50 percent with watering for dust control. All disturbed areas, including storage piles and unpaved surfaces which are not being actively used for construction, shall be effectively stabilized as needed for dust emissions using water, chemical stabilizer or suppressants, covered with a tarp or other suitable cover.
- **Air 2.** Traffic speeds on unpaved areas shall be limited to 15 miles per hour (mph).
- **Air 3.** Excavation and grading activities shall be suspended when winds exceed 20 mph.
- **Air 4.** Equipment idling time will be restricted to 15 minutes maximum or equipment must be shut off.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	

The proposed project will generate air pollutant emissions during construction and operations. These emissions will not exceed SCAQMD significance thresholds. The proposed project will not violate any air quality standard or contribute substantially to an existing or projected air quality violation. There are no records of violations in the project area. Impacts to air quality from construction of the proposed project will be considered less than significant.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?			X	
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The project area is located in the South Coast Air Basin and managed by the SCAQMD. The nearest monitoring stations are in Santa Clarita, Burbank and Reseda. The South Coast Air Basin is classified as a non-attainment area for ozone (O₃) and particulate matter (PM₁₀ and PM_{2.5}), and is in attainment status for nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur oxides (SO_x) and lead (Pb). The net increase in emissions of these pollutants from construction of the proposed project, or its operation, would not be expected to cause an exceedance of federal or state standards.

There is one other known construction project planned within a one-mile radius of the project site that could occur during the same time frame as the proposed project. The air pollutant emissions of the Lake View Estates housing project, when added to projected emissions from the proposed project, would not result exceed SCAQMD thresholds. Therefore, impacts from cumulatively considerable air pollutant emissions would be considered less than significant. Construction of housing in Tract 53933 directly south of the project site is expected to initiate in 2011. The County of Los Angeles Department of Public Works would be constructing the proposed park within the same timeframe. Based on the anticipated schedules, estimated air pollutant emissions from the housing project could overlap with the proposed project. Grading emissions were added to emissions from construction of the proposed project to determine cumulative emissions. Table 6 identifies the estimated air pollutant emissions from the cumulative condition that could occur during construction of the project.

Table 6. Estimated Cumulative Emissions During Construction of Castaic Pools Complex

Source	Emissions (lb/day)				
	CO	ROG	NO _x	SOX	PM ₁₀
Lake View Estates Housing (Tract 53933) ^a	67.49	19.60	97.66	0.00	70.64
Proposed Project (Phase 1 pool complex)	11.46	2.41	19.84	0.00	19.38
Cumulative Emissions	78.95	22.01	117.50	0.00	90.02
Significance Threshold ^b	550	75	310	150	150
Exceed Threshold?	No	No	No	No	No

^a Source: LADRP, 2010

^b Source: SCAQMD (2008) air quality significance thresholds are shown for all pollutants with the exception of NO_x. The SCAQMD Local Significance Threshold for NO_x is 310 pounds per day. Emissions from construction of the Lake View Estates project was evaluated in comparison to the LST for NO_x and determined to be below this threshold.

As shown on this table, cumulative emissions will not exceed the SCAQMD significance thresholds. Therefore, impacts from cumulatively considerable air pollutant emissions would be considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Expose sensitive receptors to substantial pollutant concentrations?			X	

The nearest sensitive receptors to the site are residents living at the Castaic Lake Recreational Vehicle (RV) Park approximately 500 ft northeast of the site. Although the RV park is located at the Los Angeles County property line, the southern portion of the RV park adjacent to County property is designated as an overflow area and does not have utility hook-ups (this area is for storage of trailers only). Sensitive receptors would also be located at the Days Inn Motel approximately 50 ft north of the site. Park patrons at the Castaic Sports Complex and employees of, or visitors to, the North Agency Headquarters would also be considered sensitive receptors (although not residents). Residents are located along The Old Road on the other side of I-5 approximately 1,000 ft west of the proposed pool complex site. The nearest child care center is approximately 1 mile north of the site. Seasonal day camp programs are located at the adjacent Castaic Regional Sports Complex; sensitive receptors would be located approximately 1,000 ft south/southeast of the project site. Residents and community members would not be expected to be exposed to substantial construction-related pollutants as a result of the proposed project because air pollutant emissions would be below SCAQMD thresholds. These thresholds take into account the existing area emissions in the vicinity of the site. Since construction and operational emissions will be lower than SCAQMD significance thresholds, impacts to sensitive receptors will be considered less than significant.

e) Create objectionable odors affecting a substantial number of people?			X	
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No activities would occur, and no materials or chemicals would be stored on-site, that would have the potential to cause objectionable odor impacts during construction at the site. Construction equipment would not generate objectionable odors discernible to nearby residents, motel guests at the Days Inn, park patrons at the Castaic Sports Complex, or employees and visitors at the North Agency Headquarters. Painting would be limited to pavement striping, sign painting, and surface coating of the pool building, and would not be expected to generate odors discernible to patrons of the adjacent sports complex. With the exception of temporary painting activities and construction vehicle exhaust, no odor-generating activities will occur at the site. These odors are not expected to be discernible to persons in the area (i.e., patrons of the adjacent sports complex) because they would be localized in the immediate working area only. The use of water-based paints as required by the SCAQMD will limit the generation of odors. Therefore, adverse odor impacts affecting a substantial number of people will not be expected during the construction period. Impacts from odors during construction are considered less than significant.

With the exception of storage of pool chemicals (i.e., liquid chlorine or other disinfectants and stabilizing agents) to be used for swimming pool maintenance, no activities would occur, and no materials or chemicals would be stored on-site, that would have the potential to cause odor impacts during operation of the pool complex. Chlorine and other liquid chemicals will be stored in approximately twenty (20) 50-gallon double-walled, closed chemical containers in a designated storage area within the pool building. Chlorine and other chemicals would be transported to the site in closed containers. The pools would be operated using a water quality management system with adequate ventilation, eye wash station, service outlet and a safety zone in accordance with Occupational Safety and Health Administration (OSHA) requirements. Because pool chemicals would be delivered and stored in closed containers, odors would not be generated. Impacts from odors during operation of the pool complex are considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Biological Resources				
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			X	

A review of the California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDDB) indicates that three listed species have been recorded in the project vicinity (Newhall quadrangle), as shown on Table 7. One of the species recorded in the project area has formal protection under the federal Endangered Species Act and the California Endangered Species Act of 1984.

Table 7. CNDDDB Species Recorded in the Project Vicinity

No.	Common Name	Scientific Name	Federal Status	State Status
<i>Plants</i>				
1	San Fernando Valley spineflower	<i>Chorizanthe parryi</i> var. <i>fernandina</i>	Candidate	Endangered
<i>Mammals</i>				
2	Pallid bat	<i>Antrozous pallidus</i>	(none)	(none)
3	Spotted bat	<i>Euderma maculatum</i>	(none)	(none)

Source: CNDDDB, 2010

The pool complex would be constructed entirely within the vacant property which is characterized as ruderal vegetation with limited native plant growth. No native biotic communities remain on the site.

The proposed site for the pool complex was surveyed by a terrestrial ecologist on March 9, 2010⁴. Neither direct sightings nor indirect evidence of species considered sensitive by the State of California, and no Federal- or State-listed threatened or endangered species, were observed in the vicinity of the proposed site. The biological evaluation found that none of these listed or sensitive species would be expected to inhabit the study area. None of the species recorded in the project area are likely to occur on the proposed site for the following reasons:

- San Fernando Valley spineflower is a low growing herbaceous annual plant that occurs in sandy and gravelly soils in mostly coastal sage scrub communities. Recent information indicates that it occurs in sparsely vegetated areas with thin or highly mineralized soils (i.e., low organic content). A member of the Buckwheat family (Polygonaceae), it was presumed to be extinct until June 1999 when it was found in the Simi Hills of Ventura County. In 2000, it was found at two locations on Newhall Ranch near Valencia/Castaic just east of the Ventura County line on the foothills of the Santa Susana Mountains. By 2007, the Newhall Ranch population of San Fernando Valley spineflower was estimated to be reduced to 760 individuals as a result of the worst drought in recorded history (CNPS, 2010). Although the range for this plant encompasses the area of the proposed site, the site lacks the alluvial outwash soils preferred by this species. No evidence of the San Fernando Valley spineflower was found on the site on March 9, 2010.

⁴ Field notes of the biological reconnaissance conducted on March 9, 2010 are included as Appendix D of this document.

The proposed project would not result in loss of habitat for this species because no suitable habitat is found on the site.

- Pallid bat is an insect-eating member of the vesper bat family that is found in arid and semi-arid regions from western Canada to central Mexico. This bat occurs in deserts, grasslands, shrublands, woodlands and forests and is most common in open, dry habitats with rocky areas for roosting. A source of water must be nearby. In 1938, a specimen of this bat was collected in the vicinity of Castaic. The range of the pallid bat encompasses the general project area and it is possible that this and other bat species may forage over the site despite the lack of roosting locations. No evidence of the pallid bat was found 0.25 mile northeast of the project site during studies conducted in 2006 (Compliance Biology, 2006⁵) or on the site on March 9, 2010. The proposed project would not result in loss of habitat for this species because no suitable habitat is found on the site.
- Considered rare in California (CDFG, 2000), the spotted bat is a larger species that is less frequently seen. It occupies a wide variety of habitats from arid deserts and grasslands through mixed conifer forests. This bat feeds over water and along washes, feeding almost entirely on moths. Rock crevices in cliffs or caves are needed for roosting (CDFG, 2000). In the late 1800s, this bat may have occurred at the mouth of Castaic Creek (Luce, 2004). The range of the spotted bat is approximately 1.2 miles south of the proposed site. No evidence of the spotted bat was found in the area during studies conducted in 2006 (Compliance Biology, 2006) or on the site on March 9, 2010. The proposed project would not result in loss of habitat for this species because no suitable habitat for this species is found on the site.

The project site is composed of a vacant lot and the fenced northern portion of the North Agency Headquarters:

- The graded and predominantly flat vacant lot has low biological value with no assemblage of any plants that are native to this region. A dirt road crosses roughly through the center of the site in a northwest/southeast direction. Sheet flow from Castaic Road has scoured a shallow channel from the northwest corner of the site. No natural watercourses or wetlands occur on the site. The drainage from Castaic Road pools at the fence line and borrow pile. The far corner of the County property northeast of the site contains an area of cottonwoods (*Populus fremontii*) and one willow (*Salix* sp.) supported by a source of surface water (this area is not within the project site boundaries).
- The fenced property within the North Agency Headquarters is composed of a materials storage area and a turfed and paved picnic grounds for employees. The picnic area contains four mature Turkish (or Calabrian) pine (*Pinus brutia*) trees, one arborvitae (*Thuja occidentalis*) tree, and two Italian or Leyland Cypress (*Cupressus sempervirens* or *Cupressosyris leylandii*) trees. West of the pine trees within the fenced area is a flowering plum (*Prunus cerasifera*) tree. No signs of great horned or barn owls roosting in these trees were observed. East of the picnic grounds is a borrow pile which forms an elongated ridge along the north side of the facility. No evidence of burrowing owl was observed in this mound, although a few ground squirrel (*Spermophilus beecheyi*) burrows have been dug. Mexican fan palms (*Washingtonia robusta*) and oleander (*Nerium oleander*) form a horticultural border inside the fence adjacent to Castaic Road.

East of the proposed site, landscaped sycamore (*Plantanus racemosa*) trees and a pine tree form a meandering line to the existing parking lot that serves the ball fields. This area contains turf subject to regular mowing. The power transmission towers east of the proposed site are protected by fenced enclosures.

Vegetation on the vacant project site exhibited patches of yellow fiddlenecks (*Amsinkia tessellata*), a popcorn flower (*Cryptantha* sp.), red clover (*Trifolium pratense*), bur clover (*Medicago* sp.), scattered

⁵ The study area for this 2006 study (Castaic Mesa Project) encompassed approximately 600 acres of land approximately 0.25 mile northeast of the proposed site for the Castaic Sports Complex Pools.

tree tobacco (*Nicotiana glauca*), and two species of lupines (*Lupinus* spp.) growing in clumps and scattered throughout. None of the plants observed on the site are protected or considered sensitive.

Wildlife observed at the site included: red-shouldered hawk (*Buteo lineatus*) foraging on the site and repeatedly returning to the thicket of trees on the west side of Castaic Road; black phoebe (*Sayornis nigricans*), house finch (*Carpodacus mexicanus*), gold finch (*Spinus tristis*), white-crown sparrow (*Zonotrichia leucophrys*), and American crow (*Corvus brachyrhynchos*). The tracks of large mammals discerned in muddy areas included: skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), house cat (*Felis silvestris*) and domestic dog (*Canis familiaris*). None of the wildlife observed on the site are protected or considered sensitive.

Impacts to biological resources from construction and operation of the proposed project would not adversely affect listed and sensitive species. The proposed project would result in removal of an area of marginal biological habitat (e.g., of limited biological value) to provide a swimming pool complex. For these reasons, impacts to listed and sensitive species would be considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?				X

The project site does not contain riparian habitat. The proposed site for the pool complex is vacant and does not contain any watercourses. The nearest watercourse is Castaic Creek approximately 1,500 ft (0.3 mile) east of the project site. Impacts to riparian habitat or other sensitive natural communities would not occur.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
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There are no federally protected wetlands on the project site or within 0.5 mile of the proposed site for the pool complex (Track Info Services, 2010). The proposed project would not result in physical modifications or placement of facilities in, or adjacent to, wetlands.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
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The Migratory Bird Treaty Act (MBTA) of 1918 (50 CFR Section 10.13) implemented the 1916 convention between the United States and Great Britain for the protection of birds migrating between the U.S. and Canada. The MBTA made it illegal for people to "take" migratory birds, their eggs, feathers or nests. Take is defined in the MBTA to include by any means or in any manner, any attempt at hunting, pursuing, wounding, killing, possessing or transporting any migratory bird, nest, egg, or part thereof. The Bald and Golden Eagle Protection Act affords additional protection to all bald and golden eagles. In total, 836 bird species are protected by the MBTA, 58 of which are currently legally hunted as game birds that are subject to migratory game bird regulations issued by the U.S. Fish and Wildlife Service (USFWS). A migratory bird is any species or family of birds that live, reproduce or migrate within or across international

borders at some point during their annual life cycle. The recognized breeding season for most species of birds is from February 1 to September 1.

The proposed construction of the pool complex would occur on previously disturbed ground with limited nesting habitat for native birds; there are no butterfly roost sites or neo-tropical bird or waterfowl stopover or staging sites on the proposed site for the pool complex. Although the potential exists for limited effects on native wildlife that may forage over the site, the proposed project would not interfere substantially with movement of wildlife because there are no established native resident or migratory wildlife corridors on the site.

The second phase of the pool complex may require the removal of ornamental landscaping within the fenced area of the North Agency Headquarters, including mature pine trees that may provide bird nesting sites. Disturbances to vegetation that take place outside of the breeding bird season (February 1-September 1) would avoid impacts to migratory nesting birds. Impacts to wildlife movement and migratory birds would be considered less than significant. As a precaution and to avoid impacts to migratory birds that may be nesting on the site (including disturbances which would cause abandonment of active nests containing eggs and/or young), the County would ensure that the following mitigation measure is implemented:

- **Bio 1.** Any vegetation removal that occurs between February 1 and September 1 will require a pre-construction nesting bird survey. Any active nests should be avoided and provided with a minimum 500 ft buffer or as determined by a biological monitor in coordination with the California Department of Fish and Game.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X

The proposed project may require the removal of up to eight trees within the fenced North Agency Headquarters in an existing picnic area inside the parking lot. None of these trees are protected by local tree preservation policies or ordinances. The proposed project would not conflict with any policies or ordinances protecting biological resources and impacts to biological resources would be considered less than significant.

f) Conflict with the provision of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
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Based on a review of approved conservation plans that cover the project site, the proposed project is not located in the planning area of any Habitat Conservation Plan or Natural Community Conservation Plan. The project site is located approximately 3.5 miles north of Los Angeles County Significant Ecological Area (SEA) No. 23 associated with the Santa Clara River. This SEA encompasses the entire Los Angeles County reach of the Santa Clara River and a wide variety of topographic features and habitat types. The proposed project would not conflict with management or protection of SEA No. 23, the only approved local, regional, or state habitat conservation plan for the project area. Therefore, the proposed project will not result in any impact to conservation efforts.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?				X

A cultural resources survey of the proposed pool complex site was conducted in March 2010 (SWCA, 2010a). Built environment resources observed in the project area include: four wooden utility poles (Elizabeth Lake-Pitchgen 66kV transmission line); a single metal transmission line tower surrounded by low chain-link fencing (Pardee Pastoria 220 kV transmission line⁶); perimeter chain-link/barbed wire fencing; temporary metal storage containers; and, temporary concrete barricades. Utility lines run through the center of the site in a north-south direction between two wooden utility poles located to the north, and one pole to the south, with a metal lattice transmission tower in the center. These transmission lines are comprised of standard towers and have been subjected to routine maintenance over the years. No historic-era built-environment resources were identified during the survey.

Research conducted at the South Central Coastal Information Center at California State University, Fullerton indicates that 28 previous cultural surveys have been conducted within one mile of the site since 1973 (SWCA, 2010a). All studies were outside the limits of the project site. No historic resources have been previously recorded within one mile of the project area or within the project site boundaries. There are no properties listed in the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Points of Historical Interest (CPHI), California Historical Landmarks (CHL), Archaeological Determinations of Eligibility (ADOE), or the California State Historic Resources Inventory (HRI) within one mile of the project area (SWCA, 2010a). The officially recognized nearest historic resource to the site is a segment of Old Ridge Route listed in 1997 and located approximately 18 miles northwest of the site. The proposed project would not result in any adverse change to historical resources. No impacts to historical resources would result from the proposed project.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		X		
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A cultural resources survey of the proposed site for the pool complex was conducted in March 2010 (SWCA, 2010a; see Appendix A of this document). No archaeological resources were observed during the intensive-level survey of the project area. The project area has been quite disturbed by grading possibly during construction of the adjacent sports fields in 1993, regular lawn mowing and some landscaping. Visibility was poor, at about 10 percent, throughout most of the project area. This was primarily due to low-lying ground cover (nonnative grasses) throughout most of the project area. Visibility was best (approximately 90%) in areas along the dirt access roads in the northern portion of the project area, and around the stockpile/storage area to the southwest. Some modern trash (i.e., glass and plastic shards) was observed on the site.

The parcel was used as agricultural lands circa 1952 and was vacant until 1993 when the Castaic Sports Complex was constructed. No archaeological resources were encountered during the records search or the field survey. Portions of the project area were likely graded during construction of the sports complex, and a portion of the project area has been disturbed by trenching activities related to underground utility lines (date unknown). The results of the study indicate that the proposed project area has a low sensitivity for encountering below-ground archaeological resources (SWCA, 2010a).

⁶ These transmission lines were constructed sometime between 1903 and 1941 based on review of historic USGS Santa Susana Topographic Quadrangles.

A check of the Native American Heritage Commission (NAHC) Sacred Lands File did not identify any Native American cultural resources or sacred sites that would be impacted by the proposed project. Nine Native American groups, as identified by the NAHC, were contacted regarding the proposed project. One group, Fernandeano Tataviam Band of Mission Indians, provided a response to indicate concern for potential disturbance of cultural resources during construction on the site⁷.

Although no archaeological resources were identified within or immediately adjacent to the project area and the results of the archaeological survey were negative, the proposed project has a potential to encounter subsurface archaeological material during ground disturbance associated with parking lot construction, trenching/excavation activities, pool building construction and construction of the swimming pools which require excavation to depths of up to 14 feet below the ground surface. To avoid potential impacts to archaeological resources that may be buried beneath the project site, the County of Los Angeles Department of Public Works would ensure that the following mitigation measures are implemented:

- **Cultural 1.** *During construction, earthwork will be monitored by a qualified archaeologist who meets Secretary of the Interior’s standards. The monitor will attend the pre-grading meeting(s) with contractors to explain and coordinate requirements and procedures for the inadvertent discovery of cultural materials during construction.*
- **Cultural 2.** *In the event any archaeological materials or subsurface deposits are exposed during ground disturbance, the construction contractor will cease activity in the affected area (e.g., redirect activities into another area within the site) until the discovery can be evaluated by a qualified archaeologist or historic resources specialist, as required, and appropriate treatment measures implemented. If the discovery proves to be significant pursuant to § 15064.5(c) of CEQA Guidelines, additional work such as testing or data recovery will be conducted as warranted. Methods during monitoring and/or recovery of archaeological resources shall be documented in a report of findings.*

With incorporation of these mitigation measures, impacts to archaeological resources would be considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Directly or indirectly destroy a unique paleontological resource or site of unique geologic feature?		X		

According to published geologic mapping, the project area is immediately underlain by Quaternary alluvium that may be, in turn, underlain by the Plio-Pleistocene age Saugus Formation. Museum collection records maintained by the Natural History Museum of Los Angeles County (LACM) indicate that at least four fossil localities yielding scientifically significant vertebrate specimens have been documented near the project area within the paleontologically sensitive Saugus Formation (SWCA, 2010b).

The Saugus Formation is a non-marine fluvial deposit consisting of conglomeratic sandstone, muddy siltstone, and conglomerate composed of detritus from source rocks such as granite, gneiss, metavolcanics, quartzite, and gabbro, within a sandy matrix and reportedly has an age range of between less than 2.5 to 0.5-0.2 million years ago (Ma) according to paleomagnetic data. The Saugus Formation has proven to yield scientifically significant vertebrate fossil localities in the vicinity of the project area including fossil horse, dog, lizard, pocket gopher, and camel specimens; therefore, this unit is determined to have a high paleontological sensitivity (SWCA, 2010b).

⁷ The Fernandeano Tataviam Band of Mission Indians indicated that their review of the site did not identify any specific cultural resources. A copy of this letter is included in Appendix A.

Surficial deposits of younger Quaternary alluvium of Holocene age generally consist of unconsolidated gravel, sand, silt, and clay deposited in modern stream channels and fluvial slope wash. Specific to the project area, these fluvial deposits are in part derived from the nearby Castaic Creek and in part as fan deposits from the surrounding higher elevations. These young sediments may overlie “older alluvium” of Pleistocene age (1.8 million years ago [Ma] to 10,000 years BP) at an unknown but potentially shallow depths. Older alluvial sediments may be slightly to moderately consolidated but are generally only distinguishable through relative dating and stratigraphic position. They might also overlie the Saugus Formation at an unknown depth (SWCA, 2010b).

Numerous fossil localities in Pleistocene-age alluvial and fluvial deposits throughout southern California have yielded fossilized terrestrial vertebrates such as mammoths, mastodons, ground sloths, dire wolves, short-faced bears, saber-toothed cats, horses, camels, and bison. Therefore, these geologic sediments are determined to have a high paleontological sensitivity. However, the Holocene age alluvial deposits in the easternmost portion of the project area are too young to contain fossils, although they may contain cultural and biological remains. Since Pleistocene-age alluvial sediments may underlie these younger sediments at a relatively shallow depth, these sediments are considered to have a paleontological sensitivity increasing from low to high increasing with depth (SWCA, 2010b).

Destruction of fossils as a result of human-caused ground disturbance can result in a significant cumulative impact, as it makes biological records of ancient life permanently unavailable for study by scientists. Any substantial project-related ground disturbances (such as mass grading, excavation, or trenching) extending into older Quaternary alluvium or the Saugus Formation may result in adverse impacts to significant paleontological resources unless proper mitigation measures are implemented. To avoid potential impacts to nonrenewable paleontological resources, the County of Los Angeles would ensure that the following mitigation measures would be implemented during construction activities:

- **Cultural 3.** *All project-related ground disturbances that could potentially impact older Quaternary alluvium or the Saugus Formation will be monitored by an experienced paleontological monitor⁸, as these geologic units are determined to have a high paleontological sensitivity. Any excavations occurring in younger Quaternary alluvium will be spot-checked at the discretion of a qualified paleontologist⁹ to ensure that underlying sensitive units are not being impacted. A qualified paleontologist will be retained to supervise monitoring of construction excavations. Paleontological resource monitoring will include inspection of exposed rock units during active excavations within sensitive geologic sediments. The monitor will have authority to halt grading away from exposed fossils in order to professionally and efficiently recover the fossil specimens and collect associated data. The qualified paleontologist will prepare monthly progress reports to be filed with the County of Los Angeles Department of Public Works.*
- **Cultural 4.** *In the event that Saugus Formation is encountered during construction monitoring, construction activities will be halted and sediment sampling for significant microfossils will be conducted as this formation is known to yield very small vertebrate specimens that may only be recovered via screen washing and hand picking. The fossils found, if any, would then be inspected and evaluated in order to determine their significance and make additional mitigation recommendations. The collection of additional matrix for screen-washing is recommended at the discretion of the qualified paleontologist. At each fossil locality, field data forms will be used to record pertinent geologic data, stratigraphic sections will be measured, and appropriate sediment samples will be collected and submitted for analysis. Recovered fossils will be prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis, and repositied in a designated paleontological curation facility. The most likely repository is the Los Angeles County Museum of Natural History. The qualified paleontologist will prepare a final monitoring and mitigation report to be filed with the County of Los Angeles Department of Public Works and the repository.*

⁸ A qualified paleontological monitor generally has a B.S. in geology (or related field) and previous paleontological monitoring experience.

⁹ A qualified paleontologist generally has a higher educational degree (Master's or above) in geology or paleontology and is responsible for supervising and directing the work of a paleontological monitor.

- **Cultural 5.** In the event paleontological resources are encountered during earthwork, the paleontological monitor will have the authority to cease activity in the affected area (e.g., divert grading away from exposed fossils and redirect activities into another area) until the resources can be evaluated, and the appropriate treatment measures implemented. The paleontologist will determine if the paleontological material should be salvaged, identified and permanently preserved in accordance with professional protocols. Recovered fossils will be prepared to the point of curation (suitable for archiving and management), identified by qualified experts, listed in a database to facilitate analysis, and repositied in a designated paleontological curation facility.
- **Cultural 6.** The qualified paleontologist will prepare a final monitoring and mitigation report to be filed with the County of Los Angeles Department of Public Works and the repository.

With incorporation of these mitigation measures, impacts to nonrenewable paleontologic resources would be considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Disturb any human remains, including those interred outside of formal cemeteries?		X		

The proposed project is not expected to encounter any human remains as a result of earthmoving activities. The project area is not otherwise known to be a previous cemetery or burial site. Therefore, the probability of encountering human remains during project construction is unlikely. To avoid potential impacts to human remains that may be buried beneath the surface in the work area, the County of Los Angeles would ensure that the following mitigation measure is implemented:

- **Cultural 7.** In the event human remains are encountered during project construction, the Los Angeles County Coroner shall be immediately contacted to determine whether or not investigation of the cause of death is required. The Coroner shall make a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The Coroner will be notified of the find immediately. In the event it is determined by the Coroner the remains are Native American in origin, the Native American Heritage Commission shall be contacted to determine necessary procedures for protection and preservation of remains, including reburial, as provided in the CEQA Guidelines, Section 15064.5(e).

With incorporation of this mitigation measure, impacts to human remains would be considered less than significant.

VI. Geology and Soils				
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	

A geotechnical evaluation of the proposed pool complex site was conducted in April 2010 (Ninyo & Moore, 2010a; see Appendix B of this document). The project site is not located within an Alquist-Priolo special studies zone (State of California Fault Rupture Hazard Zone) (City of Santa Clarita, 2009). Structures associated with the proposed pool complex would be designed and constructed to resist

damage from an earthquake corresponding to a 7.0 on the Richter scale¹⁰, and would conform to the appropriate Earthquake Design Regulations of Chapter 16, Section 1613, of the California Building Code. In addition, structures would be designed and constructed in accordance with the recommended seismic parameters as identified in the 2010 geotechnical evaluation. The potential impact from rupture of an earthquake fault is considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
ii) Strong seismic ground shaking?			X	

The nearest active earthquake fault to the project site is the San Gabriel Fault Zone, located approximately three miles southeast of the site. Ground shaking from earthquakes associated with nearby and distant faults may occur during the lifetime of the project. Because earthquake-related hazards cannot be avoided in the southern California region, the project site could be subjected to strong seismic ground shaking. The proposed pool complex would be designed and constructed to resist damage from an earthquake corresponding to a 7.0 on the Richter scale, and would conform to Seismic Zone 4 of the 2001 California Building Code (the last earthquake in Los Angeles County with a magnitude of 7.0 or greater occurred in 1812). Therefore, the potential impact from strong seismic ground shaking would be considered less than significant.

iii) Seismic-related ground failure, including liquefaction?		X		
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Liquefaction occurs when loose sand and silt that is saturated with water can behave like a liquid when shaken by an earthquake. For liquefaction to occur, there must be: (1) loose, granular sediment; (2) saturation of the sediment by ground water; and, (3) strong shaking (USGS, 2008). As shown on Figure 10, the entire project area is located in a liquefaction hazard area according to the City of Santa Clarita parcel information viewer (City of Santa Clarita, 2010).

¹⁰ The Richter magnitude scale assigns a single number to quantify the amount of seismic energy released by an earthquake. An earthquake corresponding to a 7.0 on the Richter scale would be on the high end of medium-sized earthquakes (magnitudes between 3 and 7), is generally used in building design criteria.

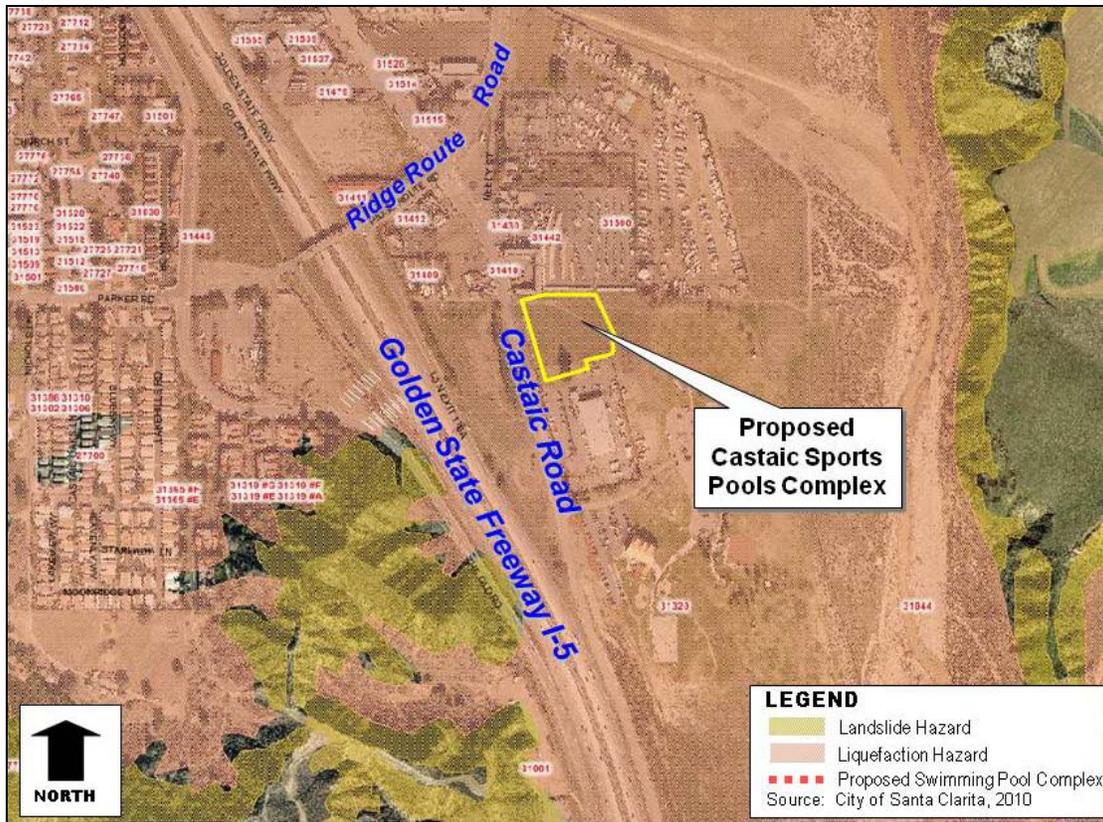


Figure 10. Liquefaction and Landslide Zones at Proposed Castaic Pools Complex

The liquefaction potential of subsurface soils at the site was evaluated in 2010 by collecting exploratory boring samples and conducting a laboratory analysis. The evaluation indicated that soils between 12 to 26 feet and 45 to 51.5 feet are susceptible to liquefaction during the design seismic event (earthquake moment magnitude of 6.6 and associated ground acceleration of 0.53 g). Based on these findings, the site may be subject to liquefaction during a design seismic event and that liquefaction-induced ground settlement up to 4 inches could occur resulting in possible structure damage (Ninyo & Moore, 2010a).

To mitigate the potential liquefaction hazards, the County will ensure that:

- **Soils 1.** *The proposed pool complex would be designed and constructed in accordance with liquefaction recommendations contained in Ninyo & Moore (2010a) and constraints of the applicable sections of the County building code. Mitigation will include measures from among the following: recompacted mat, vibro-compaction, stone columns, or a geopier system. The contractor will be advised to select from the options available that are deemed appropriate.*

With implementation of this mitigation measure, the impact from seismic ground failure is considered to be less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
iv) Landslides?				X

The project site is not located in a landslide hazard zone as shown in Figure 10. The landslide hazard zone extends along the ridge east of Castaic Creek and on the west side of I-5. The proposed pool complex is not expected to result in exposure of people or structures to substantial adverse effects,

including the risk of loss, injury, or death involving landslides. Therefore, the proposed project will not result in impacts from landslides.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Result in substantial soil erosion or the loss of topsoil?		X		

The proposed project would result in placement of up to 7,700 cubic yards of imported soil at the site. No soil would be removed from the site. To prevent or minimize the potential for erosion and loss of topsoil, the following mitigation measures will be included in plans and specifications:

- **Soils 2.** Standard erosion control measures, such as scheduling to avoid work during rainy days/monitoring of weather, use of soil binders, straw mulch, earth dikes and drainage swales, would be implemented during any ground disturbing activities (e.g., excavation and/or grading operations).
- **Soils 3.** Any topsoil removed from the work area will be temporarily placed in the immediate area and used for re-compaction purposes.
- **Soils 4.** For earthwork and excavation that occur during the rainy season (November through April), installation of berms and/or plastic sheeting should be utilized.
- **Soils 5.** Earthwork will be planned and conducted in such a manner as to minimize the duration of exposure of unprotected soils (i.e., use of plastic sheeting, timing of landscaping).
- **Soils 6.** Earthwork will be conducted using best management practices, such as single point construction entries, to minimize erosion during demolition and construction.
- **Soils 7.** In order to minimize soil loss, earthwork will include watering for dust control.
- **Soils 8.** Landscaping will be reestablished, or gravel placed, in the disturbed areas within 90 days after construction is completed on each phase, thereby reducing the potential for erosion.

With incorporation of these mitigation measures, impacts from erosion and loss of topsoil would be considered less than significant.

c) Be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		X		
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As discussed in Section VI.a)(iii), the project site is within a liquefaction hazard area. Construction of the proposed pool complex would include cut (approximately 3,075 cubic yards of soil) and fill (approximately 10,760 cubic yards of soil) of soil to ensure stability and integrity of the ground surface. To prevent or reduce the potential for adverse effects from unstable soil conditions, the following mitigation measure will be included in project planning:

- **Soils 9.** The proposed project would be designed and constructed in accordance with the recommendations of the project-specific geotechnical investigation (Ninyo & Moore, 2010a) including, but not limited to: temporary shoring; evaluation of the limits of overexcavation; review and approval of grading and foundation plans prior to construction; and, observation of compaction by a soil engineer or representative.

With incorporation of the above mitigation measure, placement of the pool complex would not be expected to result in on- or off-site landslides, lateral spreading, subsiding or collapse. Impacts from unstable soils would be considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?		X		

Expansive soil, also called shrink-swell soil, is a very common cause of foundation problems. Depending upon moisture in the ground, shrink-swell soils will experience changes in volume of up to thirty percent or more. Foundation soils which are expansive can cause lifting of a building or other structure during periods of high moisture. Conversely during periods of falling soil moisture, expansive soil will collapse and can result in building settlement. Expansive soil will also exert pressure on the vertical face of a foundation, basement or retaining wall resulting in lateral movement. Shrink-swell soils which have expanded due to high ground moisture experience a loss of soil strength or “capacity” and the resulting instability can result in various forms of foundation problems and slope failure. The American Society of Testing Materials has published an expansion index (ASTM D 4829) to quantify the results (FRG, 2010). The expansion index range and classification of potential soil expansion is shown on Table 8.

Table 8. Classification of Potential Expansion of Soils Using the Expansion Index

Expansion Index	Potential Soil Expansion
0–20	Very Low
21–50	Low
51–90	Medium
91–130	High
>130	Very High

Source: ASTM, 2010

Based on laboratory testing, some of the near-surface soils on the proposed site have an expansion index of 58 which corresponds to a medium expansion potential (Ninyo & Moore, 2010a). Soils with a medium expansion potential indicate a moderate potential for possible foundation problems. To reduce the hazards associated with expansive soils, the County will ensure that the following mitigation measure is incorporated into project design:

- **Soils 10.** *The proposed pool complex will be designed and constructed in accordance with site-specific geotechnical recommendations contained in the report entitled “Geotechnical Evaluation Castaic Pool Complex” by Ninyo & Moore (2010). To reduce the potential hazards from expansive soils, existing soils and loose alluvial soils would be overexcavated and recompacted in areas where new structures will be placed.*

With incorporation of the above mitigation measure, placement of the pool complex would not be expected to result in collapse or soil settlement. Therefore, impacts from unstable soils would be considered less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
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The proposed pool complex would be serviced by the Santa Clarita Valley Sanitation District of Los Angeles County. The proposed project would not include any requirement for use of septic tanks or alternative wastewater disposal systems. Impacts to soils from the use of septic tanks or alternative wastewater disposal systems would not occur as a result of the proposed project.

VII. Greenhouse Gas Emissions

Greenhouse gases consist of water vapor, ozone, aerosols, carbon dioxide, methane, nitrous oxide, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Greenhouse gases are calculated in emissions of three pollutants: carbon monoxide (CO₂); methane (CH₄); and, nitrous oxides (N₂O). Because other greenhouse gases represent a small fraction of emissions, a carbon dioxide equivalent (CO₂e) of the combined emissions of all greenhouse gases is computed to indicate the anticipated amount of greenhouse gases from an activity. Greenhouse gas emissions are primarily related to fossil fuel combustion for energy use. These are driven largely by economic growth and fuel used for power generation, transportation, heating, and cooling.

Greenhouse gas emissions come from a variety of sources including carbon dioxide emissions from the combustion of fossil fuels (i.e., automobile driving, electricity production, and industrial sources). Transportation (37%) and electricity production (25% - both in-state and imported) combined make up nearly two-thirds of greenhouse gas emissions in the state (ARB, 2010).

GHGs have varying global warming potentials (GWP). The GWP is the potential of a gas to trap heat in the atmosphere. The reference gas for GWP is CO₂, which has a GWP of one. Methane has a GWP of 21, which means that it has a 21-times greater global warming effect than CO₂ on a mass basis. N₂O has a GWP of 310. The GWP of greenhouse gases are shown on Table 9.

CEQA requires that lead agencies inform decision-makers and the public about potentially significant environmental impacts of proposed projects. While linking the projected greenhouse gas emissions of a project to a direct influence on climate change would be considered only speculative at this time, conclusions of significance must be based on scientific and factual data. Climate change, as it relates to man-made greenhouse gas emissions, is by nature a global and cumulative impact. According to the Association of Environmental Professionals (AEP), in its paper titled *Alternative Approaches to Analyzing Greenhouse Gas Emissions and Global Climate Change in CEQA Documents* (Hendrix and Wilson, 2007), "an individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases."

Table 9. Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (yrs)	Global Warming Potential (100 year time horizon)
Carbon Dioxide	50 to 200	1
Methane	9 to 15	21
Nitrous Oxide	120	310
HFC-23	264	11,700
HFC-134a	14.6	1,300
HFC-152a	1.5	140
PFC: Tetrafluoromethane (CF ₄)	50,000	6,500
PFC: Hexafluoromethane (C ₂ F ₆)	10,000	9,200
Sulfur Hexafluoride (SF ₆)	3,200	23,900

Source: Hendrix, 2008

HFC = hydrofluorocarbons

PFC = perfluorocarbons

Significance criteria for evaluating the impact of greenhouse gases have not been established at this time. CEQA Guidelines Section 15064.4 allows the Lead Agency to have discretion to determine, in the context of a particular project, whether to use a model or methodology to quantify greenhouse gas emissions resulting from a project or to rely on a qualitative analysis or performance based standards. When assessing the significance of impacts from greenhouse gas emissions on the environment, the Lead Agency should consider: (a) the extent to which the project may increase or reduce greenhouse gas emissions as compared to the environmental setting; (b) whether the project emissions exceeds a threshold of significance that the Lead Agency determines applies to the project; and, (c) the extent to

which the project complies with regulations and requirements adopted to implement a statewide, regional or local plan for reduction of greenhouse gas emissions.

Significance criteria for evaluating the impact of greenhouse gases have been proposed as follows:

- The SCAQMD has proposed a screening level of 3,000 metric tons of CO₂ per year for commercial or residential projects, below which project impacts would be considered less than significant. The screening level is not yet adopted. This screening level was developed to achieve the policy objective of capturing 90 percent of greenhouse gas emissions from new development projects in the residential and commercial sectors.
- The California Air Pollution Control Officers Association (CAPCOA) has identified two potential quantitative criteria for determining significance of GHG emissions from a project: (1) a 900 metric ton annual threshold that corresponds to office projects of approximately 35,000 sq ft; and, (2) a 25,000 metric tons of CO₂ per year threshold applicable to emissions from approximately 1,400 residential units.

Neither proposed threshold would be considered binding on Los Angeles County projects.

At this time, two agencies have adopted a significance criterion for operational emissions of greenhouse gases:

- On June 10, 2010, the Bay Area Air Quality Management District adopted an operational threshold of 10,000 metric tons of CO₂ per year for stationary sources.
- In December 2009, the San Joaquin Valley Air Pollution Control District adopted: *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA and the policy: District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*. This guidance and policy rely on the use of performance based standards, otherwise known as Best Performance Standards (BPS) to assess significance of project specific greenhouse gas emissions on global climate change during the environmental review process, as required by CEQA. Use of BPS is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure. Projects implementing BPS would be determined to have a less than cumulatively significant impact. Otherwise, demonstration of a 29 percent reduction in GHG emissions, from business-as-usual, is required to determine that a project would have a less than cumulatively significant impact. The guidance does not limit a lead agency's authority in establishing its own process and guidance for determining significance of project related impacts on global climate change (SJVAPCD, 2010).

Although the above criteria are intended to assess significance of project specific greenhouse gas emissions on global climate change during the environmental review process as required by CEQA, neither of the above significance criteria have been selected for the proposed project because of their jurisdiction. The CAPCOA screening value of 900 tons per year of CO₂e represents the lowest threshold for comparison currently available. The County is conservatively comparing project emissions to this threshold although emissions would be anticipated to be below criteria adopted by the Bay Area and San Joaquin Valley Air Pollution Control Districts.

The County of Los Angeles has not developed its own quantitative significance thresholds for greenhouse gases. In lieu of applicable significance criteria, the County will evaluate the proposed project against the CAPCOA screening value of 900 metric tons per year of carbon dioxide equivalent for office buildings 30,000 sq ft or more in size. Although not directly applicable to the proposed pool complex project, this threshold is the most stringent of available thresholds at this time (the proposed project could be compared to an office project in that it may generate daily vehicular emissions of a similar nature). In addition, the County will also consider the extent to which the project may increase or reduce greenhouse gas emissions as compared to the environmental setting, and, the extent to which the project complies with regulations and requirements adopted to implement a statewide, regional or local plan for reduction of greenhouse gas emissions.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	

The proposed pool complex will result in emissions of greenhouse gases during construction and operation. The proposed project will result in the generation of temporary emissions of greenhouse gases during construction of the parking lot, pools, pool building and utility tie-ins at the site. Construction-related CO₂ emissions in pounds per day were calculated as shown in Table 10.

Table 10. Estimated Carbon Dioxide Emissions from Construction of the Proposed Project

Phase	Construction Activity	CO ₂ Emissions (lb per day)
1	Demolition/Site Preparation	916.78
	Fine Grading	1,956.77
	Excavation and Trenching	1,497.75
	Pool Building Construction	1,010.94
	Asphalt/Concrete Paving	964.45
	Architectural Coatings	0.75
2	Site Preparation (Excavation)	986.54
	Asphalt/Concrete Paving	504.94
	Architectural Coatings	1.35

Source: URBEMIS model output for construction of a 3.5-acre park. Values shown reflect use of worker vehicles and construction equipment and vehicles going to and from the site.

Construction-related CO₂ in pounds per day are converted into metric tons per day by applying the conversion factor of 2,204.6 pounds per metric ton to derive the number of metric tons of CO₂ generated per day. As an example, the Phase 1 demolition and site preparation activities generate 916.78 pounds of CO₂ per day:

$$916.78 \text{ pounds per day} \div 2,204.6 \text{ pounds per metric ton} = 0.42 \text{ metric tons of CO}_2 \text{ per day}$$

The number of construction work days per year was derived based on an estimated number of work days per week and the number of months for each phase of construction. Demolition/site preparation is estimated to require 2.5 months. It is assumed that this activity would occur five (5) days per week and four (4) weeks per month. This equates to a total of 50 work days of demolition/site preparation.

$$0.42 \text{ metric tons per day} \times 50 \text{ work days total} = 20.79 \text{ metric tons of CO}_2 \text{ per year}$$

Methane and nitrous oxide emissions that would be generated during construction were estimated by applying emission factors as set forth by the Air Resources Board of the California Environmental Protection Agency (ARB, 2008).

The combined emissions of various greenhouse gases from the project are presented as a CO₂ equivalent (CO₂e). The total CO₂e is calculated by multiplying the amount of each GHG emitted from the project by its GWP (shown on Table 9), and adding each gas value to derive a total. Construction emissions of greenhouse gases expected during each phase and an annual maximum are provided in Table 11.

Table 11. Estimated Construction–Related Greenhouse Gas Emissions from the Proposed Project

Phase	Duration of Phase	Construction Phase	Emissions (Metric Tons Per Year)			
			CO ₂	CH ₄	N ₂ O	CO ₂ e
1	20 months	Demolition/Site Preparation	20.79	0.00431	0.00431	22.22
		Fine Grading	28.40	0.00473	0.00473	29.97
		Excavation and Trenching	27.17	0.00362	0.00362	28.37
		Pool Building Construction	13.49	0.00172	0.00172	14.06
		Asphalt/Concrete Paving	15.75	0.00208	0.00208	16.44
		Architectural Coatings	0.01	0.00000	0.00000	0.00
		<i>Phase 1 total</i>				97.00
		<i>Estimated Maximum Annual Emissions</i>				58.20
2	15 months	Site Preparation (Excavation)	8.95	0.00194	0.00194	9.59
		Asphalt/Concrete Paving	10.99	0.00047	0.00047	11.15
		<i>Phase 2 total</i>				20.74
		<i>Estimated Maximum Annual Emissions</i>				20.74
<i>Construction of Both Phases (over 35 months), in metric tons</i>						117.74

Notes: The CO₂-equivalent emission of each GHG is the emission rate multiplied by its corresponding global warming potential (GWP).

One metric ton equals 2,204.6 lbs

CO₂ = carbon dioxide

CO₂e = carbon dioxide equivalent of combined emissions of all GHG

CH₄ = methane

N₂O = nitrous oxides

Construction-related impacts to global climate change would result from construction workers' on-road vehicles and the equipment used for demolition/site preparation, grading of the vacant lot, pool building construction, construction of the parking lot, pools and deck, and architectural coatings and paving activities. Emissions of CO₂ during construction were estimated with the URBEMIS 2007 model (truck movements required for hauling of soil was included in the model). Estimated construction-related greenhouse gas emissions from the proposed project would be approximately 97 and 21 metric tons per year for Phase 1 and 2, respectively. The total construction greenhouse gas emissions from both phases over the course of a total of 35 months would be approximately 118 metric tons of CO₂e. When construction emissions from the project are compared the CAPCOA screening value of 900 tons per year of CO₂e, it is considerably below this criterion. Although not selected as an applicable threshold, the estimated emissions from construction are also below the Bay Area Air Quality Management District threshold of 10,000 metric tons of CO₂ per year for stationary sources. For this reason, direct and indirect impacts of greenhouse gas emissions from construction of the proposed project are considered to be less than significant.

Operation of the proposed project will result in air pollutant emissions from vehicular traffic by visitors traveling to and from the pool complex, as well as travel by employees and maintenance workers. Routine operations would include normal daily activities including scheduled programs and general public use, while special event operations would represent those occasions when additional spectators are present at competition events. Greenhouse gas emissions from annual operations are summarized on Table 12.

Table 12. Estimated Operational Greenhouse Gas Emissions from the Proposed Project

Source	Emissions (Metric Tons Per Year)			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Routine Operations ^a During Phase 1 (Pool Complex with Parking Lot, Pools and Pool Building)	60.53	0.00657	0.00657	62.71
Routine Operations ^a During Phase 2 (Phase 1 Pool Complex with Additional Olympic-sized Pool)	66.22	0.00719	0.00719	68.60
Special Events ^b in Phase 2 (Spectators Attending Competition Events at Olympic-sized Pool)	82.24	0.00914	0.00914	82.76

Notes:

^a Routine operations are assumed to result in approximately 60 visitors per day for either phase.

^b Special events during Phase 2 are assumed to result in approximately 90 visitors per event. These values represent the estimated operational emissions of GHG at full buildout of the project.

One metric ton equals 2,204.6 lbs

CO₂ = carbon dioxide

CO₂e = carbon dioxide equivalent of combined emissions of all GHG

CH₄ = methane

N₂O = nitrous oxides

Long-term operational sources of greenhouse gas emissions would be generated by vehicles driven by visitors and the energy use associated with operation of the pool complex. Greenhouse gas emissions from vehicles would result from combustion of gasoline or diesel fuel in the vehicles. Emissions of CO₂ for vehicle use was estimated in the URBEMIS 2007 computer program (refer to Table 5). For the proposed project, operation-related greenhouse gas emissions were calculated to be approximately 63 and 69 metric tons per year for Phases 1 and 2 under normal operating conditions, respectively. In the event of special events (Phase 2) such as league competition events, operation-related greenhouse gas emissions were calculated to be approximately 83 metric tons per year. When operational emissions from the project are compared the CAPCOA screening value of 900 tons per year of CO₂e, the estimated project values are below this criterion. For this reason, direct and indirect impacts of greenhouse gas emissions from operation of the proposed project are considered to be less than significant.

Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, wildfires, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems (OPR, 2008). While it is difficult to predict the precise effects or timing of such effects, adverse impacts associated with global climate change could have a common and widespread impact on communities including Castaic and the proposed swimming pools.

The highest amount of greenhouse gas emissions calculated for the proposed project (82.76 metric tons per year) would represent 0.0000003 percent of year 2006 global emissions and 0.00002 percent of the targeted California emissions per AB 32. When this individual project's contribution to greenhouse gas emissions is compared to that produced by activities elsewhere in the world, the mass of greenhouse gas emissions generated by the construction and operation of an individual project such as the proposed pool complex would be so small that the concentration of greenhouse gas emissions in the atmosphere would not be expected to change although the actual effect cannot be determined. For this reason, the project's individual impact to global climate change is considered less than significant.

The contribution of the proposed project, from both construction and operational emissions, to greenhouse gases would not exceed the CAPCOA screening value of 900 metric tons per year. The proposed pool complex would comply with the County's Energy and Environmental Policy by integrating energy efficient lighting and other features to reduce greenhouse gas emissions. Accordingly, cumulative impacts related to greenhouse gas emissions would not be considered cumulatively considerable. For these reasons, direct and indirect impacts of greenhouse gas emissions from construction and operation of the proposed project are considered to be less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?			X	

The maximum greenhouse gas emissions that would be generated by the proposed project (82.76 metric tons per year) would represent a negligible amount of year 2006 global and targeted California emissions established by AB 32. In addition to the current State regulations developed to reduce air pollution and global climate change, the County of Los Angeles Board of Supervisors adopted on January 16, 2007 a comprehensive, County-wide Energy and Environmental Policy (Policy No. 3.045) which became effective on December 19, 2006. This Policy provides guidelines for the development, implementation and enhancement of energy conservation and environmental programs within County departments. The policy mandates that all County departments implement the County Energy and Environmental programs for development of innovative energy technologies and programs to achieve environmental stewardship throughout the County. This Policy also establishes a multi-departmental Energy and Environmental Team to coordinate these efforts, develop goals and objectives, and monitor and provide periodic reports to the Board of Supervisors on the status of the program. Through this program, the County expects to achieve a 20 percent reduction of energy consumption by the year 2015, consistent with the Governor's Green Building Initiative, Executive Order (S-20-04). The current policy includes four elements and includes initiatives that include specific methods to reach these goals:

(1) Energy and Water Efficiency Program

- Implementing and monitoring energy and water conservation practices
- Implementing energy and water efficiency projects
- Enhancing employee energy and water conservation awareness through education and promotions

(2) Environmental Stewardship Program

- Environmentally Responsible Purchasing Standards
- Recycling Programs
- Environmentally Friendly Products
- Support environmental initiatives by researching existing County operations

(3) Public Outreach and Education Program

Utilizing public outreach and education channels to share utility industry information, facilitate implementation of assistance programs, and spread information and education on energy conservation practices through the region. Through coordination with regional utility companies, this program will provide County residents with energy related information including, energy and water conservation practices, utility rates and changes, rotating power outage information, emergency power outage information, and energy efficiency incentives.

(4) Sustainable Design Program

The Sustainable Design Program is intended to optimize the performance and useful life of County buildings through the integration of green features into the design of new and renovated County facilities. Building sustainability will be enhanced through the integration of green, sustainable principles into the planning, design and construction of County capital projects which:

- Complement the functional objectives of the project;

- Extend the functional life cycle/useful life of buildings and sites;
- Optimize energy and water use efficiency;
- Improve indoor air quality and provide healthy work environments;
- Reduce ongoing building maintenance requirements;
- Encourage use and reuse of environmentally friendly materials and resources;
- Establish a management approach that instills and reinforces the integration of sustainable design principles into the core competency skill set of the County's planners, architects, engineers, and project managers; and,
- Establish practical performance measures to determine the level of sustainability achieved relative to the objectives targeted for the individual project and overall capital program.

Additional methods of integrating sustainable design features into each County capital improvement project that is 10,000 sq ft or greater in size will be based on the following criteria:

- Consistency with project objectives
- Design innovation
- Potential environmental benefit
- Development and implementation costs
- Potential economic benefit/cost avoidance
- Available funding

Since adoption of the Countywide Energy and Environmental Policy in 2007, the County has achieved several goals necessary to meet compliance with the Policy. In order to meet the goal of reducing energy consumption by 20 percent in County facilities by the year 2015, the County has already begun to implement energy efficient projects, such as replacing inefficient building lighting systems and air conditioning equipment. Thus, annual electrical energy consumption in County facilities was reduced by 0.8 percent in 2007 and 1.5 percent in 2008; annual gas consumption was reduced by 1.9 percent in 2007 and 2.1 percent in 2008 (County of Los Angeles, 2009b). The County has also expanded its efforts at waste reduction and recycling, green purchasing and contracting, and the use of clean fuels in fleet vehicles.

In accordance with the County of Los Angeles Energy and Environmental Policy, the proposed project will be designed to incorporate sustainable energy efficient features for sustainable site development, water savings, energy efficiency, and materials and resources selection. With incorporation of energy efficiency features, carbon dioxide (CO₂) emissions from the proposed pool complex would be reduced. The project will not conflict with the County of Los Angeles Energy and Environmental Policy which has been adopted for the purpose of reducing the emissions of greenhouse gases. As discussed in Section III.a, the proposed pool complex would not conflict or obstruct implementation of the AQMP as established by the SCAQMD. The proposed pool complex would be constructed in order to provide a recreational opportunity to the local public and would be designed to accommodate projected population increases in the area. The project would be designed to reduce vehicle miles traveled by the public to other aquatic centers that are located farther from residential areas. As such, the project would meet goals and objectives of the AQMP by minimizing vehicle miles traveled for recreation, which consequently minimizes emissions of greenhouse gases. Therefore, impacts to greenhouse gas are considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. Hazards and Hazardous Materials				
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?		X		

Project-related construction would entail the use of small quantities of hazardous materials such as diesel fuel, paints and solvents. Transport of these materials is regulated by the State and transport to the site would comply with these regulations. Best management practices would be used during construction to prevent and control spills and leaks of these substances.

ExxonMobil recently removed approximately 250 ft of an abandoned 10-inch diameter oil pipeline buried beneath the site. Limited soil samples taken at the site in July 2010 showed low levels of total petroleum hydrocarbons and volatile organic compounds adjacent to underground pipelines. No visible soil impacts were noted during the excavation process for pipeline removal. Although concentrations of these constituents sampled in July 2010 were below regulatory limits and no visible signs of contamination were observed during pipeline removal, there is a potential for encountering contaminated soil during construction (Ninyo & Moore, 2010b). The improper disposal of contaminated soil can pose a risk to the public. For this reason, the following mitigation measure will be implemented:

- **Hazards 1.** All soil removal will be required to adhere to the provisions of a soil management plan¹¹ that will include procedures and recommendations to follow in the event soil contamination is encountered during earthwork activities. The soil management plan will specify procedures for the disposal of contaminated soil.

The project site is located within the administrative boundaries of the Tapia Oil Field. Although no wells associated with this oil field are located on the site, eight oil wells¹² are located within 0.5 mile of the site. Limited soil samples taken at the site near the underground pipeline in July 2010 showed levels of hydrogen sulfide detected above the recommended ceiling limits established by the National Institute for Occupational Safety and Health (NIOSH) and the Occupational Safety and Health Administration (OSHA) (Ninyo & Moore, 2010b). Exposure to this substance can pose a health risk to the public. For this reason, the following mitigation measure will be implemented:

- **Hazards 2.** The contractor will be required to implement a monitoring program for hydrogen sulfide during construction activities on the site.
- **Hazards 3.** In the event that any enclosed, underground structure (e.g., basement or utility vault) is constructed as part of the pool complex, the County of Los Angeles will implement a monitoring program for hydrogen sulfide gas.

With implementation of these mitigation measures, the health hazard to the public from hazardous materials into the environment would be considered less than significant.

Other than delivery of liquid chlorine and other pool chemicals in closed containers that will be used for maintenance of the swimming pools, the proposed project would not involve any routine transport, use or disposal of hazardous materials. Liquid chlorine and other chemicals will be stored in a locked, secure storage area (a total of 1,500 gallons of liquid chlorine solution would be stored in two tanks). All chlorine

¹¹ The soil management plan is included as Appendix E.

¹² One oil well is present to the north, three to the south and four southeast of the project site (Ninyo & Moore, 2010).

would be used on site and no disposal of this substance is anticipated. The use and disposal of hazardous materials at the site would be limited to use of commercial solvents and cleaners for normal maintenance activities. The impact of the proposed project from hazardous materials would be considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	

The operation of the pool complex would involve routine use of pool chemicals and commercial cleaning materials including solvents; however, the potential for an unforeseen upset or accident involving hazardous materials would be minimal and the impact from release of hazardous materials into the environment would be considered less than significant. Liquid chlorine and other chemicals will be stored in a locked, secure storage area. Hazards to the public from the release of hazardous materials into the environment would be considered less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
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There are no schools within 0.25 mile of the project site. The nearest school is Opportunities for Learning, a 7-12 charter school approximately 0.6 mile northwest of the site. A new high school in Castaic, planned to be opened by 2013, is approximately 2.3 miles west of the project site. The proposed project would not use or store hazardous substances in quantities that could result in a significant hazard to the public. Chemicals that would be stored in the pool building would be limited to liquid chlorine in closed containers as well as commercial cleaners and bleach for routine maintenance of the grounds. Therefore, an accidental explosion or release of toxic or hazardous substances at the pool complex would not be expected to occur near an existing or proposed school. The impact from hazardous emissions from the proposed project would be considered less than significant.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			X	
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A search of available environmental records was conducted on February 24, 2010 to identify properties that have had known releases of regulated substances, or which have had histories involving the use, storage, treatment, generation, disposal, or handling of hazardous substances. There were three leaking underground storage tank sites, one of which is active, within approximately 0.5 mile of the proposed site. A summary of the nearest cleanup sites is provided on Table 13.

Table 13. Contaminated Sites Near the Proposed Pool Complex Site

No.	Owner	Address	Distance from Pool Complex	Description and Status
1	Shell Service Station	31428 Ridge Route Road Castaic, CA 91384	0.25 mile northwest	Potential contamination of drinking water supply from leaking underground gasoline storage tank. Eight wells monitored since 2001. Case closed by the RWQCB on 12/17/09.
2	Village Fuel Stop	31611 N. Castaic Road Castaic, CA 91384	0.37 mile northwest	Potential contamination of drinking water supply from leaking underground gasoline storage tank discovered in 1997. This site is an active diesel fuel dispensing facility that has been required to take corrective action for the fuel leak. Groundwater wells have been monitored quarterly since 2001. Open Site Assessment as of July 10, 2010; owner is required by the RWQCB to submit a work plan, interim remedial action plan and continue quarterly monitoring of the groundwater.
3	Giant Truck Stop	31711 N. Castaic Road Castaic, CA 91384	0.55 mile northwest	Potential contamination of drinking water supply from leaking underground diesel storage tank. Wells monitored since 2000. Case closed 7/6/04.

Source: Envirostor, 2010; Geotracker, 2010

Case Closed denotes no further studies are underway or required.

A search of available environmental records was conducted on February 24, 2010 to identify properties that have known contamination. The proposed project would not be located on a known hazardous waste site per Government Code Section 65962.5 nor would it be expected to be affected by known contaminated sites in the immediate area. The site is approximately 0.37 mile southeast of a leaking underground storage tank site now under remediation and being monitored by the RWQCB. Because this contaminated site is being monitored and the gasoline contamination is not expected to extend to the project site, impacts from hazardous materials and wastes would be considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X

There are no public airports located within two miles of the proposed project. The closest public airport is Agua Dulce Airport located over 15 miles east of the site. The proposed project area is not within the planning boundary or airport influence area of Agua Dulce Airport (ALUC, 2004). The proposed project would not result in any safety hazard for aircraft or interfere with operations or plans relating to this public airport. Therefore, there would be no impacts from safety hazards associated with public airports.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
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The proposed project is not within the vicinity of a private airstrip. The closest private airstrip to the site is the Sheriff's Wayside Heliport approximately 2.2 miles southeast of the site. Other private use airports in

the project area are shown on Table 14. Therefore, there would be no safety hazard or impacts to people working or residing in the project area.

Table 14. Private Airports in the Vicinity of the Proposed Castaic Pool Complex

No.	Name of Private Airstrip	Location	Distance from Site
1	Sheriff's Wayside Heliport	Valencia	2.2 miles southeast
2	Castaic Dam Heliport	Castaic	2.3 miles northeast
3	SCE Pardee Heliport	Newhall	4.3 miles southeast

Source: www.airport-data.com/airport/WHP/nearby-airports.html

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	

Emergency preparedness, readiness and response are managed by multiple agencies that include the Chief Executive Office, Sheriff's Department, and Department of Health Services. The County maintains a multi-departmental emergency response plan depending on the type of disaster. The proposed project is located within Los Angeles County Disaster Management Area B¹³. The proposed project would not result in any interference with existing emergency response or emergency evacuation plans for local, state or federal agencies. Road closures would not be required. Emergency access during construction would not be impeded. All emergency procedures would be implemented within local, state, and federal guidelines. Therefore, impacts to emergency response or evacuation plans would be considered less than significant.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X	
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The construction and operation of the proposed project would not result in any increase in the fire hazard at or near the project site. Since the project site is located in a wildland/urban interface, there is potential for wildland fires in the vicinity, however, the proposed project does not increase this risk of wildland fires. The proposed site for the pools complex is located in fire County of Los Angeles Fire Department Zone 4, Very High Fire Hazard Severity Zone (VHFSZ). Design of the pools complex will meet all applicable fire code and ordinance requirements for construction, access, water mains, fire hydrants, fire flows, brush clearance and fuel modification plans. Therefore, the impact from wildland fires would be considered less than significant.

¹³ Located in Region I which covers five counties in southern California, Area B encompasses most of northern Los Angeles County including the Antelope Valley.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Hydrology and Water Quality				
Would the project:				
a) <i>Violate any water quality standards or waste discharge requirements?</i>			X	

There are no surface water bodies on the site. The nearest watercourse is Castaic Creek approximately 0.25 mile east of the project site. Castaic Creek is a tributary of the Santa Clara River which drains into the Pacific Ocean (LARWQCB, 1994).

Water quality standards for Castaic Creek and the Santa Clara River are included in the Regional Water Quality Control Plan for Los Angeles County ("Basin Plan"). Effluent and receiving water limitations are included in National Pollutant Discharge Elimination System (NPDES) permits and Waste Discharge Requirements. The County of Los Angeles NPDES permit and the Basin Plan mandate that best management practices (BMPs) be applied to construction projects to ensure that water quality standards are maintained. The project will be required to obtain coverage under the NPDES Construction General Permit issued by the Regional Water Quality Control Board. The County will be required to prepare and implement a Standard Urban Stormwater Mitigation Plan (SUSMP) that outlines the necessary BMPs which must be incorporated into design plans.

The proposed project would require demolition and construction activities that would be confined to the site. Water would not be discharged from the construction work area or reach Castaic Creek. Standard erosion control measures will be incorporated into project design and construction to prevent impacts to water quality. With incorporation of best management practices for erosion control and storm water management during construction, these activities would not be expected to violate any applicable water quality standards or waste discharge requirements. Construction-related impacts to water quality standards or waste discharge requirements would be considered less than significant.

Operation of the pool complex would require periodic maintenance activities that include the infrequent discharge of swimming pool water when water is changed out. Pool water overflow would be discharged to the sewer. The pool complex would include a water quality management system with a pre-engineered filtration system that would recirculate and treat pool water at 1.5 times the circulation required by the Los Angeles County Health Department. A chemical treatment system for chlorine and acid treatment would provide continuous treatment. There will be limited times when the pool water would be replaced with new supply. Discharge of pool water and the flushing of water lines are generally considered a low threat when discharged to land; and are not expected to adversely affect the quality of groundwater. Pool water from the proposed complex would be discharged to the sewer. Operational-related impacts to water quality standards or waste discharge requirements would be considered less than significant.

b) <i>Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?</i>			X	
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Castaic is within the Santa Clara River Valley Groundwater Basin. The Santa Clara River is the largest river system in southern California that remains in a relatively natural state (LARWQCB, 1994). The proposed site is located 0.25 mile west of Castaic Creek, a tributary to the Santa Clara River. Recharge of the basin is from a variety of sources. Runoff contains natural stream flow from the surrounding

mountains, precipitation falling on impervious areas, reclaimed wastewater, and industrial discharges. Water flowing in surface washes infiltrates into the basin (CDWR, 2004).

Water use at the proposed pool complex would be limited to site watering for dust control during the construction period. During operations, water use would be required for swimming pools, restrooms, showers, drinking fountains, and grounds irrigation. This water would be obtained from local groundwater sources or purchased from water purveyors. The amount of water needed to fill the swimming pools is:

- Recreation Pool 368,039 gallons
- Shallow Pool 41,236 gallons
- Splash Pad 2,805 gallons
- Olympic-sized Swimming Pool (Phase 2) 920,097 gallons

The proposed pool complex would result in an increase of approximately 3.5 acres of impervious surface on the site. The use of porous asphalt paving at the complex would reduce the amount of impervious surface area. The proposed project would not result in substantial depletion of ground water supplies from the basin or interference with groundwater recharge because water for the pools will be treated and reused to the maximum extent possible. The project would not result in a net deficit in aquifer volume or a lowering of the local groundwater table level. The proposed pool complex would not substantially contribute to depletion of groundwater. Therefore, impacts to groundwater supplies would be considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?		X		

Surface drainage at the site moves in a southeasterly direction from Castaic Road onto the site and exits the site at its southeast corner. Drainage gullies have formed in the shoulder of Castaic Road at the northwestern corner of the site (Figure 11).



Figure 11. Drainage Gullies Along Castaic Road at Northwest Corner of Site (Looking Northwest)

The proposed project would be designed to modify the existing on-site drainage pattern to accommodate the new pool complex and its parking lot. No streams or rivers would be altered. The pool complex would be designed with adequate drainage and storm water flow systems. Although potential impacts would not be considered significant, the design and construction of the project would incorporate the following mitigation measures to prevent erosion and siltation:

- **Water 1.** *The existing natural drainage and current surface flows from Castaic Road will be conveyed to and across the pool complex site to avoid flooding along Castaic Road.*
- **Water 2.** *All surface drainage would be directed away from structures so that ponding of water is not allowed, especially near foundations.*
- **Water 3.** *Erosion control measures (such as sand bags and berms) would be implemented during construction to minimize the potential for sediment to be picked up and transported off-site or by runoff.*
- **Water 4.** *Construction equipment would not be rinsed off on-site in such a manner to affect nearby drainageways. The contractor will be required to ensure that water used to rinse off equipment on the site does not enter the storm drains.*
- **Water 5.** *Construction materials (when not in use) will be covered and stored in contained areas away from any drainage areas.*

The County would also be required to also be required to submit Permit Registration Documents (PRD) to the State Water Resources Control Board in order to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharge Associated the Construction and Land Disturbance Activities, Order No. 2009-009-DWQ, NPDES No. CAS000002 (or the latest approved general permit).

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?			X	

The site is located approximately 0.25 mile west of Castaic Creek. Drainage on the site is currently to the southeast. The proposed Castaic Pool Complex would be designed to include drainage improvements to increase infiltration and decrease runoff from the site. The project would not substantially alter the existing drainage pattern of the site or surrounding area. The proposed project would not result in any alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off- site. For this reason, impacts to drainage relative to flooding would be considered less than significant.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
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The proposed project would contribute to stormwater runoff due to an increase in impervious surface area. This would result from construction of a parking lot, pool building, swimming pools, and decking that would cover approximately 3.5 acres of the land. The pool complex will be designed to incorporate

Low Impact Design (LID) drainage improvements¹⁴, such as porous pavement, to reduce the amount of runoff that enters the storm drain system. Substantial additional sources of polluted runoff would not occur because site drainage improvements would ensure that storm water runoff would be retained and infiltrated onsite in accordance with Los Angeles County SUSMP and LID requirements. With proper design, impacts from increased runoff would be considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Otherwise substantially degrade water quality?			X	

The proposed project would not result in any other effects that could substantially degrade water quality. The proposed project would be designed and constructed with best management practices to avoid impacts to water quality. During operation of the pool complex, the complete changeout of pool water would be an infrequent event due to the water treatment and recycling system to be provided. Swimming pool water would be discharged to the sanitary sewer. In addition, operation of the pool complex will incorporate the following mitigation measure to prevent degradation of water quality:

- **Water 6.** *Cleaning and maintenance procedures for the pool complex will include prohibiting any rinsewater or trash from entering storm drains.*

No substantial degradation of water quality would be expected to occur as a result of the proposed project. Impacts to water quality would be considered less than significant.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
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The proposed project would not result in the placement of housing in the 100-year flood hazard area. Therefore, the project would not result in any impact from flooding.

h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?			X	
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The proposed project would not result in the placement of structures within any 100-year flood hazard area. With incorporation of drainage features that increase infiltration and provide adequate site drainage, flood flows in the area would not be impeded or redirected. Impacts from construction within a 100-year flood hazard area would be considered less than significant.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	
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Castaic Dam is located 2.1 miles north of the project site on Lake Hughes Road just north of the community of Castaic. This dam is an earth filled dam located at the confluence of Castaic and Elizabeth Lake Creeks. The dam facing is approximately 1 mile across with a maximum capacity of 350,000 acre-feet of water, covering a surface area of 2,600 acres with 34 miles of shoreline. A breach in the dam would result in flow of water south in Castaic Creek for approximately five miles to the Santa Clara River. (County of Los Angeles, 2010). Failure of this dam during a catastrophic event, such as a severe earthquake, is considered unlikely due to the type of dam construction. However, local safety plans have considered the possibility of dam failure and have outlined a procedure for response and recovery from this type of hazard, including identification of inundation areas and evacuation routes (County of Los Angeles, 2009a). The proposed site for the pool complex is not located within the Special Flood Hazard

¹⁴ Details of LID elements will be determined during design of the facility.

Area (SFHA) High Risk Zone associated with Castaic Lake nor is there historic flooding in the area. The proposed project would not expose people or property to an increase in flood-related hazards. Therefore, impacts from flooding associated with dam failure would be considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
j) Inundation by seiche, tsunami, or mudflow?				X

Flooding associated with seiches (wave-like oscillations of water in an enclosed basin caused by earthquakes, high winds or other atmospheric conditions) is not anticipated at the project site due to its distance from enclosed bodies of water. The project site is located north of the San Fernando Valley, over 30 miles from the coast; therefore, the potential for inundation by a tsunami is expected to be a rare occurrence. The proposed project would not result in any increased risk for inundation by mudflow. Impacts from seiche, tsunami or mudflow would not be expected.

X. Land Use and Planning				
Would the project:				
a) Physically divide an established community?				X

The proposed project would consist of construction of a new public swimming pool complex on land owned by the County of Los Angeles. The complex would be located adjacent to an existing sports complex. No additional land would be required. The proposed project would not result in any physical division of the community. Therefore, the project will not result in any impact to an established community.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
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The proposed pool complex would be located in the planning area of the Santa Clarita Valley Area Plan, which is a component to the Los Angeles County General Plan. The goal of this community plan is to provide focused goals, policies and maps to guide the regulation of development within the unincorporated portions of the Santa Clarita Valley. The Santa Clarita Valley Area Plan generalized land use designation for the proposed project site is Open Space. This land use designation also covers the adjacent sports complex and typically covers areas in use for parks and recreational activities. The future land use at the proposed site would not conflict with this land use designation. Impacts to land use plans and policies from the proposed project would be considered less than significant.

The proposed site for the pool complex is zoned as Open Space – Parks and Recreation (OS-PR) by County of Los Angeles Department of Regional Planning. The future land use at the proposed site would be recreational. The proposed project represents an allowable use under the current zoning. There would be no impacts to zoning from the proposed project.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
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The proposed project is not located in the planning area of any Habitat Conservation Plan or Natural Community Conservation Plan. The project site is not located within any Los Angeles County Significant Ecological Area (SEA). The nearest SEAs to the project site are: the Santa Clara River SEA

approximately 2.3 miles south; and, the Cruzan Mesa Vernal Pools SEA approximately 2.6 miles east. The proposed project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The project would not result in any impact to conservation plans.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Mineral Resources Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			X	

The project site is located in Mineral Resource Zone (MRZ)-2, which is an area where geologic information indicates that significant inferred mineral resources for construction aggregate such as sand and gravel may be present. MRZ-2 is considered to be an area of prime importance due to known economic mineral deposits often concentrated along waterways such as Castaic Creek. There are no active surface mining at or near the proposed site. No oil or gas wells are in production at or near the proposed site. The proposed project would preclude the use of any mineral resources beneath the site (because the site would be entirely covered) although no such minerals would be lost as a result of the project. For these reasons, the impact of the proposed project on mineral resources would be considered less than significant.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?			X	
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The project site is located within an MRZ-2 area as defined in Section XI.a and as delineated on a local land use plan. The proposed project would not require the removal of any locally important mineral resources, nor would it result in any interference with existing mining operations. Therefore, impacts to mineral resources would be considered less than significant.

XII. Noise Would the project result in:				
a) Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		

The primary noise source in the vicinity of the project site is motor vehicle traffic along Castaic Road and the Golden State Freeway. Occasional noise from the adjacent sports complex is generated during scheduled events. The proposed site is approximately 450 ft from the Golden State Freeway (Interstate 5). Traffic along Castaic Road is associated primarily with commercial businesses and the regional sports complex north and south of the site, respectively. The 24-hour average noise level along this segment of Castaic Road between Ridge Route Road and Lake Hughes Road (north of the site) is estimated to be 71.1 decibels at 50 ft from the roadway centerline (County of Los Angeles, 2009a). Traffic noise generated by Castaic Road is discernible at the project site. The nearest residents are approximately 250 ft northeast of the project site (within the Castaic Lake RV Park). Temporary occupants at the Days Inn Motel (guests and employees) are located approximately 30 ft north of the site. It is estimated that the existing noise level at the motel (approximately 50 ft north of the site) is approximately 70 dB while the existing noise level at the RV park (approximately 250 ft northeast of the

site) is approximately 67 dB.¹⁵ In addition to these noise receptors, employees are present at the North Agency Headquarters facility immediately south of the site. Existing noise level at the headquarters building are expected to be approximately 70 dB.

Noise impacts from the proposed project would be a function of the noise generated by construction equipment, the location and sensitivity of nearby land uses, and the duration of the noise-generating activities. The construction of proposed pool complex would include clearing, grading and excavation. Heavy equipment that could be used during construction of the complex would include: backhoe, bulldozer, excavator, concrete truck, dump truck, front-end loader, paver, roller, and water truck. Operation of construction equipment may generate intermittent noise levels up to 75 dBA at approximately 100 ft from the source. During construction, temporary periods of increased noise levels could be expected in the immediate area of the pool complex, including at the motel north of the site and the Castaic Lake RV Park that borders the northeastern portion of the Castaic Sports Complex.

The County of Los Angeles does not have quantifiable construction noise limits; however, Title 12 Section 12.12.030 of the Los Angeles County Code establishes construction noise limits based on the time and day as follows:

Except as otherwise provided in this chapter, a person, on any Sunday, or at any other time between the hours of 8:00 p.m. and 6:30 a.m. the following day, shall not perform any construction or repair work of any kind upon any building or structure, or perform any earth excavating, filling or moving, where any of the foregoing entails the use of any air compressors; jackhammers; power-driven drill; riveting machine; excavator, diesel-powered truck, tractor or other earth moving equipment; hand hammers on steel or iron, or any other machine, tool, device or equipment which makes loud noises to the disturbance of persons occupying sleeping quarters in a dwelling, apartment, hotel, mobilehome, or other place of residence. (Ord. 9818 § 1, 1969; Ord. 8594 § 6, 1964.)

Section 12.08.440 of the Los Angeles County Code contains restrictions applicable to construction noise. These guidelines:

- restrict the operation of construction equipment from 7:00 p.m. and 7:00 a.m. or at any time on Sundays or holidays;
- establish that maximum noise levels from mobile equipment shall not exceed 75 dBA from 7:00 a.m. to 8:00 p.m., or 60 dBA from 8:00 p.m. to 7:00 a.m., in single-family residential areas;
- establish that maximum noise levels from stationary equipment not exceed 60 dBA from 7:00 a.m. to 8:00 p.m., or 50 dBA from 8:00 p.m. to 7:00 a.m., in single-family residential areas;
- require that all mobile or stationary internal combustion engine-powered equipment of machinery be equipped with suitable exhaust and air-intake silencers in proper working order.

Although temporary noise increases associated with project construction may result in annoyance to some people in the area (including North Agency Headquarters employees who are outside the building), construction activities would be limited to daytime hours in accordance with noise restrictions established in Section 12.12.030 of the County Code. Noise from construction activities will be considered less than significant because the estimated construction equipment noise will not exceed the maximum daytime noise limit for construction which is 75 dBA for mobile equipment. Due to the proximity of the construction work area to residents north of the site and workers at the North Agency Headquarters, the following mitigation measures will be implemented:

- **Noise 1.** *The construction contractor will conduct truck loading, unloading, hauling and other operations so that noise is kept to a minimum to avoid generating noise near the motel north of the site.*
- **Noise 2.** *All construction equipment will be outfitted with noise abatement devices and will be periodically inspected for effectiveness. No equipment shall have an unmuffled exhaust.*

¹⁵ The projected noise level is based on noise attenuation of approximately 1.2 decibels per 1,000 ft in distance.

- **Noise 3.** *The construction contractor will use and relocate temporary sound barriers, as required, to avoid excessive construction noise. Noise barriers can be made of heavy plywood or include moveable insulated sound blankets.*
- **Noise 4.** *The construction contractor shall implement appropriate additional noise abatement measures including at a minimum, but not limited to, changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, or installing acoustic barriers around stationary construction noise sources.*
- **Noise 5.** *The construction contractor will comply with the Los Angeles County Noise Control Ordinance and, in consideration of nearby residences, avoid construction activities during evening, nighttime, weekend, and holiday periods, except as authorized by the County. Construction work shall be limited to the hours of 7:00 a.m. to 4:00 p.m., except as authorized by the County.*
- **Noise 6.** *The construction contractor will post (on the construction site fencing) a phone number for noise complaints on the site, and address complaints within two (2) business days.*

With incorporation of the above mitigation measures, impacts from construction noise would be considered less than significant.

With regard to operation of the pool complex, an average day-night sound level of 65 dBA is generally accepted as a standard for residential communities (HUD, 2010). This land use compatibility guideline represents an averaged noise level over a 24-hour period and includes a penalty of 10 dB¹⁶ for nighttime hours. This standard would not be applicable to the project site because the area north of the site, including the motel, is zoned as commercial land. The North Agency Headquarters immediately south of the site is zoned as Public Facilities and also not subject to the residential noise standard.

The Los Angeles County Noise Control Ordinance, Title 12 of the County Code, was adopted by the Board of Supervisors in 1977 "...to control unnecessary, excessive, and annoying noise and vibration ...". It declared that County policy was to "...maintain quiet in those areas which exhibit low noise levels and to implement programs aimed at reducing noise in those areas within the county where noise levels are above acceptable values" (Section 12.08.010 of the County Code). On August 14, 2001, the Board of Supervisors approved an ordinance amending Title 12 of the County Code to prohibit loud, unnecessary, and unusual noise that disturbs the peace and/or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitivity residing in the area. Regulations can include requirements for sound barriers, mitigation measures to reduce excessive noise, or the placement and orientation of buildings, and can specify the compatibility of different uses with varying noise levels. The County exterior noise standard for commercial properties is 55 decibels from 10:00 p.m. to 7:00 a.m. (nighttime) and 60 decibels for 7:00 a.m. to 10:00 p.m. (daytime).

For a water recreation land use category, such as the proposed pool complex, the normally acceptable Community Noise Exposure Level (CNEL) is 50 to 70 dBA (HUD, 2010). CNEL is a 24-hour, time-weighted energy-average noise level based on dBA that measures the overall noise during an entire day.

Noise from operation of the first phase of the proposed pool complex (no Olympic-sized pool) would result from use of the swimming pools and vehicle entry/exit at the parking lot. Pool equipment noise would not be audible because this equipment would be enclosed within a building. Human noise emanating from the pools would generally not be discernible to motel occupants because: pools would be over 85 ft from the motel; and, windows and doors of the motel do not face the pool complex site (with the exception of one window). Noise would not be discernible to RV park residents approximately 250 ft northeast of the site. Noise could be discernible to employees at the North Agency Headquarters, however this noise would be limited only to those employees who are outside the building (immediately south of the pool complex). For this reason, the anticipated noise levels during Phase 1 operation of the pool complex would not be expected to exceed Los Angeles County exterior noise standards for commercial properties.

¹⁶ When noise levels over a 24-hour period are averaged, the eight hours in the nighttime are assessed a 10 dB penalty to account for the impact of noise during these hours.

Noise levels during Phase 2 pool complex operations would be the similar to Phase 1 with the exception of temporary periods of time when scheduled competition events are held in the Olympic-sized pool. During these special events, up to 758 persons could be present over the course of the day. Noise emanating from the Olympic-sized pool would generally not be discernible to motel occupants because: the Olympic-sized pool would be over 200 ft from the motel; and, windows and doors of the motel do not face the pool complex site (with the exception of one window). Noise could be discernible to North Agency Headquarters employees, however this noise would be limited only to those employees who are outside the building (immediately south of the pool complex). Noise would not be discernible to North Agency Headquarters employees who are inside the building as well as to RV park residents approximately 250 ft northeast of the site. The anticipated noise levels during Phase 2 operation of the pool complex would not be expected to exceed Los Angeles County exterior noise standards for commercial properties. For these reasons, operational noise from the proposed project is considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?		X		

Site preparation will require mitigation for liquefaction; the specific method(s) have not been selected at this time. In the event that the vibro-compaction method is used in addition to supporting structures on shallow foundations, groundborne vibration may occur. To reduce the effects of vibration, the County will ensure that the following mitigation measures are incorporated into project design:

- **Noise 7.** *In the event that vibro-compaction methods are used for liquefaction prevention, the County of Los Angeles Department of Public Works will provide surrounding residents and businesses (minimum radius of 300 ft) at least 30 days written notice of the start date and duration of pile driving activities.*
- **Noise 8.** *In the event that vibro-compaction methods are used for liquefaction prevention, construction contractor will prepare a Vibration Noise Reduction Plan containing site-specific noise attenuation measures to ensure maximum feasible noise attenuation. The plan shall be approved by the County of Los Angeles Department of Public Works. Noise reduction measures may include, but not be limited to: (1) limiting hours of operation of the vibro-compaction equipment based on input from surrounding neighbors and businesses; (2) conducting noise and vibration measurements to ensure effective noise reduction; and, (3) implementation of vibration reduction measures (as required based on measurements taken) under the supervision of an acoustical consultant.*

With incorporation of the above mitigation measures, impacts from groundborne vibration would be considered less than significant.

Construction of the pool complex is not expected to include the use of any equipment that is considered an impact device. Excessive amounts of groundborne vibration or noise levels would not be expected from compacting and grading equipment to be used. Therefore, impacts from groundborne vibration would be considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	

The proposed project would result in a permanent increase in noise levels from use of the pool complex. Both Phases 1 and 2 development of the pool complex would result in a permanent increase in ambient noise levels as a result of vehicles accessing the parking lot and human noise emanating from the swimming pools into the surrounding community. The noise increase would not be audible to occupants at the motel or RV park as well as to North Agency Headquarters employees that are outside the building. The existing ambient noise is approximately 70 decibels (see Section XII.a). The ambient noise level expected from Phase 2 of the pool complex would be greater than the Phase 1 pool complex because of the addition of the Olympic-sized pool. The estimated increase in ambient noise levels that could be experienced during the operational hours of the pool complex would not be expected to exceed 75 dB. When averaged over a 24-hour period, the expected ambient noise level would be with the normally acceptable range and not considered a substantial increase. A substantial permanent increase in the 24-hour average ambient noise level in the vicinity would not be expected because of the limited size of the pool complex, its limited parking, and because noise level increases would be restricted by pool hours. Increased noise levels would occur during special events at the pool complex. The permanent increase in ambient noise levels would not be substantial because no change to existing ambient noise levels in the project vicinity after park hours would occur. Therefore, impacts to ambient noise levels in the project vicinity would be considered less than significant.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
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The proposed project would result in a temporary increase of up to 4 db¹⁷ in ambient noise levels during the construction period as a result of the use of heavy construction equipment. Intermittent noise levels up to 75 dBA at nearby residences could result during construction which would be limited to daytime only (construction would be limited to daytime hours, typically 7 a.m. to 4 p.m.). The increase in noise during construction would not represent a substantial increase in ambient noise levels in the project vicinity. Intermittent noise at this level would not result in a violation of the maximum daytime noise level restriction for mobile equipment which is 75 dBA in single-family residential areas. The impact of the temporary increase in noise would be considered less than significant.

Operation of the pool complex would also result in periodic increases in noise levels during group activities in Phase 2 of the park. These conditions also would not represent a substantial increase in ambient noise levels in the project vicinity. Therefore, the temporary or periodic increases in ambient noise from the proposed project would be considered less than significant.

¹⁷ A potential change from 71 dB existing noise level 50 ft from Castaic Road to intermittent periods of up to 75 dBA during construction activities as measured 100 ft from a noise source.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			X	

The proposed project is not located within any Airport Master Plan area or within two miles of any public or public use airport. Therefore, there would be no impacts from excessive noise levels within an airport land use plan area or within two miles of a public airport.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X
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The proposed pool complex would not be located in the vicinity of any private airstrips. The proposed project would not expose people residing or working in the area to excessive noise levels. The proposed project would not result in impacts from excessive noise levels.

XIII. Population and Housing				
Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	

The proposed project will result in the presence of persons at the new pool complex at this location (the pool complex would have the capacity to serve approximately 758 persons during special events). The project, however, would not directly or indirectly induce population growth. This is because the site is in an area of existing commercial businesses that borders an open space with an existing sports complex and, as such, would not directly induce the development of new housing in the area. The proposed project would not have direct growth inducing effects, although it would support the recreational needs associated with ongoing growth in the local community. The proposed project would not indirectly induce substantial population growth in the area or result in the need for additional infrastructure. No extension of roads or other infrastructure would result from proposed project. Impacts to population growth would be considered less than significant.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
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The proposed project would not displace any housing. The proposed pools would be constructed within the boundaries of vacant land owned by the County of Los Angeles. Therefore, the project would not result in any impacts to housing.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
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The proposed project would not displace any people, or result in the need for replacement housing elsewhere. Therefore, the proposed project would not result in any impacts to housing.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. Public Services Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?			X	

Fire protection services in Castaic are provided by the Los Angeles County Fire Department, along with several local, State and federal agencies under mutual aid agreements (County of Los Angeles, 2009a). The nearest fire station to the proposed pool complex is Fire Station No. 149 at 31770 Ridge Route Road, approximately 0.56 mile northeast of the site. The proposed project would result in a new public facility that will require fire protection services, but this would not result in a substantial increase in the demand for fire protection services or generate a need for new fire stations in the area because the site is already within an existing service area. Impacts to fire protection would be considered less than significant.

b) Police protection?			X	
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The Los Angeles County Sheriff's Department provides police protection in the project area. The proposed project would not interfere with circulation for pedestrians, vehicles, and police patrols. The proposed project would result in a new public facility that will require police protection services, but this would not result in a substantial increase in the demand for police protection services because the site is already within an existing service area. Impacts to police protection would be considered less than significant.

c) Schools?				X
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The proposed project would not generate any additional population in the area, and therefore would not impact local school enrollments. The proposed project would not otherwise adversely impact existing and planned schools in the area. The project may have a beneficial effect on local schools that utilize new recreational facilities that would be located in the new pool complex. Additional recreational opportunities would be provided adjacent to the existing Castaic Sports Complex. No impacts to schools would result from the proposed project.

d) Parks?				X
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The proposed project would result in a beneficial effect on parks by providing new recreational opportunities in Castaic. New facilities at this pool complex would provide improved recreational for the local community. The proposed project would not result in impacts to existing or planned parks in the region.

e) Other public facilities?				X
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The proposed project facilities would be operated and maintained by the County of Los Angeles or its designated operator, and would not result in any impacts to other public facilities.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Recreation				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	

The purpose of the proposed project is to improve recreational and community opportunities in Castaic by providing a new facility for use by the general public. The proposed pool complex would provide a new recreational opportunity in the local area. The new pool complex would not be expected to result in an increased use of the adjacent sports complex because of the difference in scheduled activities at each facility. The proposed project would not result in substantial deterioration of other recreational facilities at a rate greater than normal use would cause. Therefore, impacts to existing or planned neighborhood and regional parks would be considered less than significant.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?			X	
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The proposed project would result in a new pool complex which is a recreational facility. Physical effects on the environment would include construction-related impacts from air pollutant emissions and noise. With implementation of mitigation measures as described in Sections III(a) and XII.(a) and (b), the long-term environmental impacts from the operation of the new pool complex would be considered less than significant.

XVI. Transportation/Traffic Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit)?			X	

Castaic Road, serving as the primary access road to the proposed pool complex, is a 2-lane secondary highway from Tapia Canyon Road to Ridge Route Road. There are no bike paths along the frontage of the proposed site. As a secondary highway, when fully improved and operating at a Level of Service E¹⁸, can accommodate approximately 36,000 vehicles per day. Average daily traffic¹⁹ along Castaic Road is shown on Table 15.

¹⁸ Level of Service (LOS) E is characterized by significant delays and average travel speeds of 33 percent or less of the Free Flow Speed. Such operations are caused by a combination of adverse progression, high signal density, high volumes, extensive delays at critical intersection, and inappropriate signal timing. LOS E represents a roadway operating at the maximum capacity.

¹⁹ Average Daily Traffic is the average number of vehicles that travel a segment of roadway during a 24-hour period.

Table 15. Average Daily Traffic on Castaic Road

End 1	End 2	Average Daily Traffic	Speed
Parker Road	Lake Hughes Road	24,000	50 mph

Source: County of Los Angeles, 2009a

During construction, workers would access the work site on a daily basis using the site entrance on Castaic Road. Assuming that all the workers travel in single occupant vehicles, this would result in up to an estimated 20 daily inbound and outbound vehicle trips. These trips would occur before morning and evening peak hour traffic. Movement of the construction vehicles and equipment would not be expected to result in any change to the volume-to-capacity ratio of area roadways or congestion at intersections in the local area. Construction of the new pool complex would not result in any substantial effects on traffic.

The proposed pool complex would primarily serve the local community. The Phase 1 pool complex is estimated to result in approximately 288 persons on the site each day based on Los Angeles County estimates. Operation of the Phase 1 pool complex would result in up to three (3) maintenance vehicles entering and exiting the parking lot each day. It is estimated that approximately six (6) permanent personnel would be assigned to the Phase 1 pool complex. The Phase 1 pool complex is estimated to generate 576 vehicle trips per day which could result in 48 trips per hour over 12 hours of operation. The existing roadway would have sufficient capacity to accommodate this level of traffic.

The Phase 2 pool complex would result in an increase in traffic over Phase 1 levels as a result of additional activities that would be scheduled in the Olympic-sized pool. The Phase 2 pool complex is estimated to result in approximately 758 persons on the site each day. Normal operations would require up to five (5) maintenance vehicles and eight (8) employees. Routine operation of the Phase 2 pool would generate 1,516 vehicle trips per day which could result in 126 trips per hour over 12 hours of operation. The existing roadway would have sufficient capacity to accommodate this level of traffic because the average daily traffic would not exceed the capacity of the road.

Following completion of the Phase 2 pool complex, special events such as swim meets or pool rentals could be scheduled. For these events, the pool complex could accommodate approximately 758 persons at the complex during the event. This condition could generate an estimated 1,516 vehicle trips per day which could result in 126 trips per hour over 12 hours of operation. The existing roadway would have sufficient capacity to accommodate this level of traffic because the average daily traffic would not exceed the capacity of the road.

Castaic Road is within the planning area of the Circulation Element of the Santa Clarita Valley Area Plan (Draft, 2009). This plan does not specify an acceptable Level of Service for long-range planning for this road, but the restriping this roadway between Lake Hughes Road and Ridge Route Road from 4 to 6 lanes has been identified as a future improvement for build-out of the highway plan to achieve acceptable levels of service. The proposed project would not conflict with any plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. Impacts of the proposed project to traffic levels of service on roads and highways would be considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			X	

The Congestion Management Plan (CMP) adopted by the CMP agency in Los Angeles County in 1992 (and most recently updated in 2004) does not designate Castaic Road as a CMP roadway. The proposed pool complex along Castaic Road would be a recreational facility to be used primarily by local residents. The proposed project would not conflict with the Los Angeles County CMP, its level of service standards, travel demand measures, or other standards established for designated roads or highways. Impacts to the congestion management efforts from the proposed project would be considered less than significant.

c) Results in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
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The proposed project would not result in any changes to air traffic patterns that could result in any increases in safety risks.

d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
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Roadway modifications and improvements along Castaic Road to provide safe access into the proposed pool complex will be included in accordance with County of Los Angeles Department of Public Works and Department of Regional Planning requirements. No substantial increase in hazards or incompatible uses would be anticipated as a result of the proposed project. Impacts from roadway hazards associated with design features or incompatible uses would be considered less than significant.

e) Result in inadequate emergency access?				X
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The new pool complex would be operated in accordance with safety policies defined in the Los Angeles County Safety Element and would follow the appropriate area emergency response plan. No changes in access to emergency facilities or nearby land uses are expected to occur as a result of implementation of the project.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?			X	
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The proposed project would be designed and operated to support alternative transportation with the inclusion of a bicycle racks in the parking lot. There are no bike lanes along Castaic Road. The Santa Clarita Bus (Route 1) runs along Ridge Route Road and has a stop at the intersection of Castaic Road (approximately 800 ft from the proposed pool complex). Roadway modifications and improvements to provide safe access into the proposed pool complex will be included in accordance with County of Los Angeles Department of Regional Planning requirements. Therefore, the proposed project would not result in any conflicts with policies that support public transit, bicycle, or pedestrian facilities. The

proposed project would not otherwise decrease the performance or safety of such facilities. Impacts to public transit performance and safety would be considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. Utilities and Service Systems Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X

The proposed project would result in discharge of wastewater from operation of restrooms in the pool building into the sanitary sewer system. Although not designed at this time, restrooms would likely include low-flow fixtures and waterless urinals. There are no treatment requirements for domestic wastewater established by the Los Angeles Regional Water Quality Control Board applicable to the proposed project. Impacts to water quality standards or waste discharge requirements would be considered less than significant.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
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The primary sources of water in the planning area include groundwater pumped from the aquifers in the East Subbasin, supplemented by imported water from the State Water Project (County of Los Angeles, 2009a). Water for the pool complex would be provided by the Newhall County Water District.

The County Sanitation Districts of Los Angeles County operate two water reclamation plants (WRP), Saugus WRP and Valencia WRP, which provide wastewater treatment in the Santa Clarita Valley. These interconnected facilities form a regional treatment system known as the Santa Clarita Valley Joint Sewerage System (SCVJSS) which has a design capacity of 28.1 mgd and currently processes an average flow of 20.2 mgd.

The proposed project would not generate wastewater during the construction period. It is estimated that operation of the Phase 1 pool complex would generate approximately 5,100 gallons of wastewater per day for restrooms and staff areas; the Phase 2 pool complex would generate approximately 3,000 gallons of additional wastewater on an average day as a result of increased use associated with the Olympic pool. On a day with a scheduled special event, the Phase 2 pool complex could generate approximately 15,000 gallons of wastewater. Changeout of the swimming pool water would be an infrequent occurrence (less than once per year) because the pools would have a water quality management system to enable on-site treatment and recycling of pool water. The proposed project would not require the construction of new water or wastewater treatment facilities, or the expansion of existing facilities. Impacts to water or wastewater treatment facilities from the proposed project would be considered less than significant.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
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The proposed project would include an on-site storm water drainage system to accommodate the new parking lot, pool building, pools and decks. The pool complex would be designed to incorporate Low Impact Design (LID) drainage improvements, such as porous pavement, to reduce the amount of runoff that enters the storm drain system. Construction of these facilities would not result in significant

environmental effects. Impacts from construction of the storm drainage system would be considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	

Water for the proposed pool complex would be provided by Newhall County Water District which utilizes groundwater supplies derived from recharge of the unchannelized Santa Clara River and its tributaries. Evidence shows that no adverse impacts on basin recharge has occurred due to the use of local groundwater supplies, consistent with the operating plan for the basin. Recharge of groundwater has not been reduced nor has stored groundwater been depleted in the local basin (County of Los Angeles, 2009a).

The proposed project would use a limited amount of water (trucked to the site on water trucks) to control dust during the construction period. Design of the pool complex would include onsite water treatment and conservation features. It is estimated that the Phase 1 pool complex would use approximately 2,900 gallons of water per day for restrooms and staff areas. The initial Phase 1 startup of the three pools (recreational pool, shallow pool and splash pad) would require approximately 412,080 gallons of water. Pool water would be replaced only to maintain a constant surface level. Complete changeout of pool water would be an infrequent event because of the pool water treatment and recycling system.

It is estimated that the Phase 2 pool complex would use approximately 3,700 gallons of water per day as a result of additional operation of the Olympic pool. No additional restrooms would be added however, use of the existing restrooms would increase. An additional 920,097 gallons of water would be required for startup of the Olympic-sized pool to be added for Phase 2. The total water required for both Phase 1 and Phase 2 pools would be approximately 1,332,177 gallons for startup.

The proposed pool complex would not require new or expanded water entitlements. Therefore, impacts to water supply would be considered less than significant.

e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
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The County Sanitation District of L.A. County would provide wastewater disposal and treatment for the proposed pool complex. The Los Angeles County Sanitation District has prepared a Facilities Plan for the Santa Clarita Valley which identifies planned expansions through 2015. The Santa Clarita Valley Joint Sewerage System currently processes an average flow of 20.1 million gallons per day. Wastewater flow originating from the project will discharge directly to the District's Castaic Trunk Sewer located in Castaic Road south of Neely Street. This 15-inch diameter trunk sewer has a design capacity of 4.1 million gallons per day (mgd) and conveyed a peak flow of 1.3 mgd when last measured in 2008. A direct connection to a Districts' trunk sewer requires a Trunk Sewer Connection Permit issued by the Districts.

The operation of the proposed pool complex would result in wastewater generation from restrooms and maintenance activities as well as infrequent discharge of pool water. The project would be designed to include a pool water treatment and recirculation system and low-flow water fixtures in restrooms. The expected average wastewater flow from the first phase of the project is 5,100 gallons per day (gpd) and 3,000 gpd for the second phase. The County Sanitation District had adequate capacity to serve the projected demand for this project in addition to its current commitments. The proposed project would not

result in generation of wastewater that would exceed the capacity of this provider. Therefore, impacts to wastewater treatment systems would be considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	

The Santa Clarita Valley is served by three Class III (non-hazardous) landfills: Chiquita Canyon Landfill near Val Verde; Antelope Valley Landfill in Palmdale; and, Sunshine Canyon Landfill in Sylmar. With approved expansions, these landfills will have capacity to serve the valley beyond 2020 (County of Los Angeles, 2009a). Construction activities would generate solid waste, however waste management during construction would include diversion of wastes from disposal through recycling and reuse. Construction wastes would not be expected to significantly impact landfill capacities. Solid waste from the project would be disposed of any of the approved landfills. The proposed pool complex would be designed to include recycling of wastes. Operation of the proposed pool complex would not be expected to generate a substantial increase in solid waste. The project would be served by a landfill with permitted capacity to accommodate solid waste disposal needs. Impacts to solid waste disposal would be considered less than significant.

g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	
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All solid waste disposal would be managed in accordance with applicable federal, state and local statutes and regulations. Impacts to solid waste would be considered less than significant.

XVIII. Mandatory Findings of Significance				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?			X	

As discussed herein, the analysis conducted in this Initial Study results in a determination that the project, with implementation of mitigation measures, would result in a less than significant effect on the local environment. The construction activities associated with the proposed project would not be expected to substantially degrade fish, wildlife, and/or plant populations because there are no such populations on the site. Intrusion on any previously undiscovered cultural or historic resources would not be anticipated however, mitigation for inadvertent discovery of cultural materials has been included in this analysis. The proposed site does not contain any important examples of the major periods of California history or prehistory. For these reasons, the project would result in a less than significant impact on the quality of the environment.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X	

There is one planned project within 1.0 mile of the proposed Castaic Sports Pools Complex site that would contribute to cumulative impacts (a distance of one mile was selected because it represents a reasonable area in which environmental impacts of the proposed project, when combined with other projects, could be expected for a project of this type). According to State CEQA Guidelines Section 15355, cumulative impacts refer to two or more individual effects which, when considered together, are considerable of which compound or increase other environmental impacts. A project may have effects that are individually limited but cumulatively considerable when viewed in connection with the effects of past projects, the effects of other current project, and the effects of probably future projects. As noted in Section 1.13 and based on current information, construction of the Lake View Estates housing project could overlap with construction of the proposed project. The project’s incremental contribution to cumulative effects on a regional scale would not be considerable. When the potential impacts of the proposed project are viewed in connection with past projects, its impacts would not be considered cumulatively considerable. The cumulative impacts of the proposed project, are therefore, considered less than significant.

The proposed project would not result in cumulative impacts to aesthetics, agriculture and forest resources, biological resources, land use and planning, mineral resources, population and housing, public services, recreation, transportation/traffic, utilities and service systems because impacts to these resources would be less than significant (or no impacts would be anticipated as is the case with agriculture and forest resources). These impacts would not be cumulatively considerable. The proposed pool complex would be designed and constructed in accordance with all applicable codes, laws, ordinances and regulations to prevent or minimize environmental degradation. Impacts to these resources from the proposed project would not contribute to cumulative impacts in the area.

The proposed project would include mitigation measures to avoid or minimize environmental impacts to air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, and noise. With implementation of mitigation measures (as described in Sections III.a, V.b, IV.d, V.c, V.d, VI.a.iii, VI.b, VI.c, VI.d, VIII.a, VIII.c, IX.c, IX.f, XII.a and XII.b), impacts would be considered less than significant.

Greenhouse gas emissions from the proposed project would be less than significant because these emissions would be below the CAPCOA screening value of 900 metric tons per year (selected threshold). Greenhouse gas emissions would be reduced with the incorporation of energy efficient light fixtures. Emissions of greenhouse gases from the proposed project would represent 0.0000003 percent of year 2006 global emissions and 0.00002 percent of the targeted California emissions per AB 32. When this individual project’s contribution to greenhouse gas emissions is compared to that produced by activities elsewhere in the world, the mass of greenhouse gas emissions generated by the construction and operation of the proposed project would be so small that the concentration of greenhouse gas emissions in the atmosphere would not be expected to change. For this reason, the project’s individual impact to global climate change is considered less than significant. The project’s incremental contribution to cumulative effects on a regional scale would not be considerable.

When the potential impacts of the proposed project are viewed in connection with past and ongoing projects (both of which have been incorporated into the existing baseline of environmental conditions), its

impacts would not be considered cumulatively considerable. Therefore, the cumulative impacts of the proposed project are considered less than significant.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?			X	

Environmental effects that would result from the project would include construction-related impacts from noise, dust and localized traffic increases. None of the construction-related impacts are considered substantially adverse effects or would be considered significant impacts. During the operating hours of the pool complex, periods of increased noise may result and be audible to occupants of the adjacent motel, RV park residents and employees that are outside the North Agency Headquarters building south of the site. Direct and indirect substantial adverse effects on human beings would not be expected as a result of the construction and operation of the proposed swimming pool complex. The proposed project has the potential to provide beneficial health effects to its patrons because of the recreational opportunities to be provided. The new pool complex would be designed with energy and water conservation features, and structures to support alternative transportation, in order to prevent or reduce adverse environmental effects. Therefore, impacts from the proposed project on humans are considered less than significant.

NOTE: Authority cited: Section 21083, 21083.05, Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21080, 21083.05, 21095, Pub. Resources Code; *Eureka Citizens for Responsible Govt v. City of Eureka* (2007) 147 Cal. App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

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3.2 List of Preparers

- Paul Farmanian, P.E., Technical Advisor (Parsons)
- Elvira Gaddi, P.E., Technical Advisor (Parsons)
- Rosemarie Crisologo, CEQA Task Manager/ Air Quality (Parsons)
- John Moeur, Ecologist/Principal Scientist (Parsons)
- Angela Schnapp, Environmental Engineer (Parsons)
- Eric Spangler, Transportation Engineer (Parsons)
- Phillip Jo, Noise Control Specialist (Parsons)
- Kip Harper, Cultural Resource Specialist (SWCA)

APPENDIX A

**CULTURAL RESOURCES ASSESSMENT
FOR CASTAIC SPORTS COMPLEX POOLS PROJECT**

Cultural Resources Assessment for the Castaic Sports Complex Pools Project, Unincorporated Community of Castaic, Los Angeles County, California

Prepared for:

County of Los Angeles Department of Public Works

and

Parsons Corporation

Prepared by:

SWCA Environmental Consultants

June 2010

**CULTURAL RESOURCES ASSESSMENT FOR THE
CASTAIC SPORTS COMPLEX POOLS PROJECT,
UNINCORPORATED COMMUNITY OF CASTAIC,
LOS ANGELES COUNTY, CALIFORNIA**

Prepared for

**County of Los Angeles
Department of Public Works**
510 South Vermont Avenue, Room 201
Los Angeles, California 90020

and

Parsons Corporation
Attention: Rosemarie Crisologo
100 W. Walnut Street, Suite B4
Pasadena, California 91124

Prepared by

Caprice D. (Kip) Harper, M.A., RPA,
Samantha Murray, B.A.,
and
John Covert, B.A.

SWCA Environmental Consultants
625 Fair Oaks Avenue, Suite 190
South Pasadena, California 91030
(626) 240-0587
www.swca.com

USGS 7.5-Minute Topographic Quadrangle
Newhall, CA 1995

SWCA Project No. 16311

SWCA Cultural Resources Report Database No. 10-90

June 2010

Keywords: CEQA; cultural resources survey; negative results; 3.5 acres; unincorporated Los Angeles County; Newhall quadrangle; Township 5 North; Range 17 West

MANAGEMENT SUMMARY/ABSTRACT

Purpose and Scope: On behalf of the Los Angeles Department of Public Works, Parsons retained SWCA Environmental Consultants (SWCA) to conduct cultural resources studies that include: the results of a cultural resources literature search; review of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF), initial Native American coordination, an intensive-level cultural resources survey (for both archaeological and built environment resources), and to prepare this Cultural Resources Assessment report in support of the proposed County of Los Angeles Department of Public Works, Castaic Sports Complex Pools Project, within the unincorporated community of Castaic, Los Angeles County, California. This study was completed under the provisions of the California Environmental Quality Act (CEQA). Public Resources Code (PRC) Section 5024.1, Section 15064.5 of the Guidelines, and Sections 21083.2 and 21084.1 of the Statutes of CEQA were also used as the basic guidelines for the cultural resources study (Governor's Office of Planning and Research 1998).

Dates of Investigation: The California Historical Resources Information System (CHRIS) records search was conducted by Caprice (Kip) Harper at the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton on February 24, 2010. The California NAHC SLF search was initiated on February 23, 2010. The results of the SLF search and a list of Native American contacts were received from the NAHC on March 8, 2010. Letters requesting information on known cultural resources within and near the project area were sent to the identified Native American contacts on March 11, 2010. SWCA staff conducted an intensive-level cultural resources survey on March 11, 2010. This report was completed in June 2010.

Summary of Findings: Twenty-eight prior cultural resource studies have been conducted within a one-mile radius of the project area. None of these previous studies occurred within the project area. In addition, the records search did not identify any previously recorded cultural resources within the project area. The NAHC SLF search revealed that no Native American cultural resources are known to be present within the project area. SWCA's intensive-level survey did not identify any archaeological or built environment resources within the project area. The results of the study indicate that the project area is heavily disturbed by grading, mowing, and landscaping, and that there is a low potential for encountering subsurface archaeological deposits.

Investigation Constraints: The project area has been heavily developed in recent years and has been largely disturbed by modern human activity, including farming. The intensive-level archaeological survey was partially constrained by previous disturbances such as grading, trenching for an abandoned gas line, and ornamental landscaping, mostly the planting of grasses.

Recommendations: Because no "historical resources" as defined in CEQA were identified in the proposed project area, no additional cultural resources mitigation measures should be necessary. Standard archaeological mitigation measures to minimize impacts to unanticipated discovery of belowground cultural resources or the unanticipated discovery of human remains are described below.

In the event that cultural resources are exposed during construction, work in the immediate vicinity of the find must stop until a qualified archaeologist can evaluate the significance of the find. Construction activities may continue in other areas. If the discovery proves significant under CEQA, additional work such as testing or data recovery may be warranted. The methods employed during monitoring, testing, or data recovery of archaeological resources should be documented in a report of findings.

The discovery of human remains is always a possibility during ground disturbances; State of California Health and Safety Code Section 7050.5 addresses these findings. This code section states that no further disturbance shall occur until the Los Angeles County Coroner (the Coroner) has made a determination of origin and disposition pursuant to PRC Section 5097.98. The Coroner must be notified of the find immediately. If the human remains are determined to be prehistoric, the Coroner will notify the NAHC,

which will determine and notify a Most Likely Descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Disposition of Data: This report and any subsequent related reports will be filed with Parsons; SCCIC at California State University, Fullerton; and with the Pasadena office of SWCA Environmental Consultants. All field notes, photographs, and records related to the current study are on file at the SWCA Pasadena, California, office.

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APPENDICES

Appendix A: South Central Coastal Information Center Bibliography

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INTRODUCTION

SWCA was retained by Parsons Corporation on behalf of the Los Angeles Department of Public Works (LADPW) to conduct cultural resources studies that include: a literature search, initial Native American coordination, and an intensive-level cultural resources survey (for both archaeological and built environment resources) in support of a Cultural Resources Assessment report for the proposed Castaic Sports Complex Pools project. The project is located within the northwest corner of Assessor's Parcel Number (APN) 2865-012-916, at 31230 Castaic Road, in the unincorporated community of Castaic, Los Angeles County, California. The community of Castaic is approximately 35 miles northwest of downtown Los Angeles. The proposed project area also includes the northern portion of Los Angeles Department of Parks and Recreation's (LADPR) North Agency Headquarters complex (APN 2865-012-907) at 31320 Castaic Road. The proposed project area is directly adjacent and to the east of the Golden State Freeway/Interstate 5 (I-5).

This study was completed under the provisions of the California Environmental Quality Act (CEQA). Public Resources Code (PRC) Section 5024.1, Section 15064.5 of the Guidelines, and Sections 21083.2 and 21084.1 of the Statutes of CEQA were also used as the basic guidelines for the cultural resources study (Governor's Office of Planning and Research 1998). PRC Section 5024.1 requires the identification and evaluation of cultural resources to determine their eligibility for listing in the California Register of Historical Resources (CRHR). The CRHR is a listing of the state's historical resources and indicates which properties are to be protected from substantial adverse change, as defined in CEQA, to the extent prudent and feasible.

Cultural Resources Project Manager, Caprice D. (Kip) Harper, M.A., RPA, managed the project, conducted the records and literature review at the SCCIC, and acted as principal investigator and quality control officer. Cultural Resources Specialists Samantha Murray, B.A., and John Covert, B.A., prepared the report. Mr. Covert also conducted the cultural resources survey and took the photographs found in this report. This report was edited by Technical Editor Elizabeth Slocum, B.A.

PROJECT LOCATION AND DESCRIPTION

The County of Los Angeles proposes to construct and operate a new swimming pool complex which will occupy approximately 3.5 acres of the northwest corner of the existing Castaic Sports Complex and a portion of the LADPR North Agency Headquarter's property (proposed project). The proposed project would be located along Castaic Road, approximately 700 feet south of Ridge Route Road within APN 2865-012-916, at 31230 Castaic Road and APN 2865-012, at 31320 Castaic Road in the unincorporated community of Castaic, Los Angeles County, California. The project will be constructed in two phases. Figure 1 shows the project location on the U.S. Geologic Survey (USGS) Newhall, California 7.5-minute quadrangle, and Figure 2 shows an aerial photograph of the proposed project area within the parcels. Figure 3 illustrates the site layout for both the first and second (future) phases. Figure 4 is a conceptual site plan.

The first phase of the project would include concrete decking, bicycle racks, steel trash receptacles, drinking water fountains, security lighting, drain lines (with system backwash) that would drain into the sanitary sewers, security fencing, landscaping with drought-tolerant vegetation, an automatic irrigation system for landscaped areas and tree wells, drainage improvements, sidewalks, and the installation of electrical, water and communication lines. Walkways and access would be designed and constructed in compliance with Americans with Disability Act (ADA) requirements. Lifeguard towers and heated pool water would be provided for each swimming area. The first phase of the construction would require:

- Demolition and site clearing of a portion of the northern periphery of the North Agency Headquarters including some area inside and outside the existing fence (Figure 3). This area is used for materials storage.
- Removal of 165 feet of an abandoned 10-inch diameter oil pipeline and portions of the two 3-inch and 8-inch water pipelines that run across the site. The abandoned 24-inch gas pipeline at the site has been removed and backfilled.
- Trenching for new utilities to be constructed would include: sanitary sewer and storm drain connections, new electrical circuits for area and security lighting, and water lines for a drinking water and irrigation system.
- Site preparation would include clearing and grading for placement of the parking lot, drainage improvements, concrete decking, and walkways. It is estimated that the project would result in the need for approximately 3,075 cubic yards (cy) of soil to be cut, approximately 10,760 cy of soil to be filled, and approximately 7,700 cy of soil to be imported to the site. The maximum depth of excavation would be approximately 9 feet below existing grade for Phase 1 construction and approximately 14 feet below existing grade for Phase 2 construction. The pool deck would be constructed on fill material.
- Asphalt and concrete paving (parking areas, drainage improvements, curbs, and concrete decking) would cover most of the 3.5 acres of the complex. Porous asphalt concrete may be used in limited areas in accordance with Low Impact Development (LID) requirements.
- Landscaping would include planting of trees and shrubs around the complex, parking lot, and walkways.
- The pool complex would be accessed by a single entrance along Castaic Road. The driveway would provide two-way access into a parking lot with a turnaround area. A total of approximately 65 parking spaces, including three (3) ADA-compliant spaces, and a ramp would be constructed.
- Roadway modifications and improvements to provide safe access into the pool complex will be included in accordance with County of Los Angeles Department of Regional Planning requirements.

Construction would include roadway and access improvements along Castaic Road. While some temporary detours may be required, closures of entire roads would not be expected during the construction period. Construction vehicles and equipment would be staged on-site. Construction of the first phase of the pool complex would require approximately 20 months and is expected to initiate in early 2012.

The second phase of construction would include:

- Expansion of the pool building by 5,000 square feet to include space for a classroom and weight/exercise room.
- Construction of a 50-meter Olympic-size swimming pool with improvements to accommodate competitive swimming, diving, and water polo training. ADA-compliant bleachers for approximately 175 patrons would be provided.

The second phase of the pool complex would require approximately 15 months for construction (start date to be determined contingent upon funding). For evaluation purposes, construction of the second phase of the pool complex was assumed to start in early 2013.

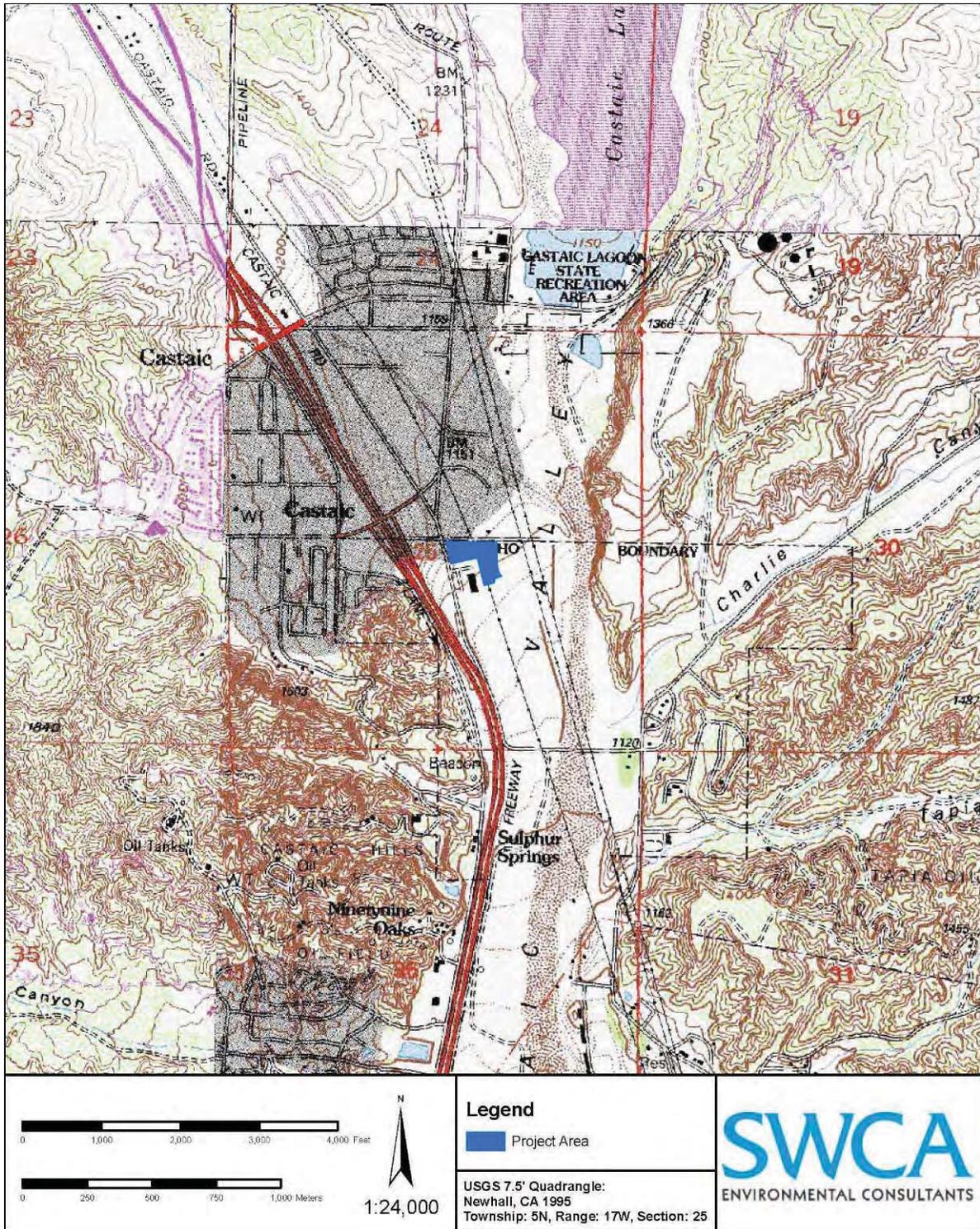


Figure 1. Project Location Map

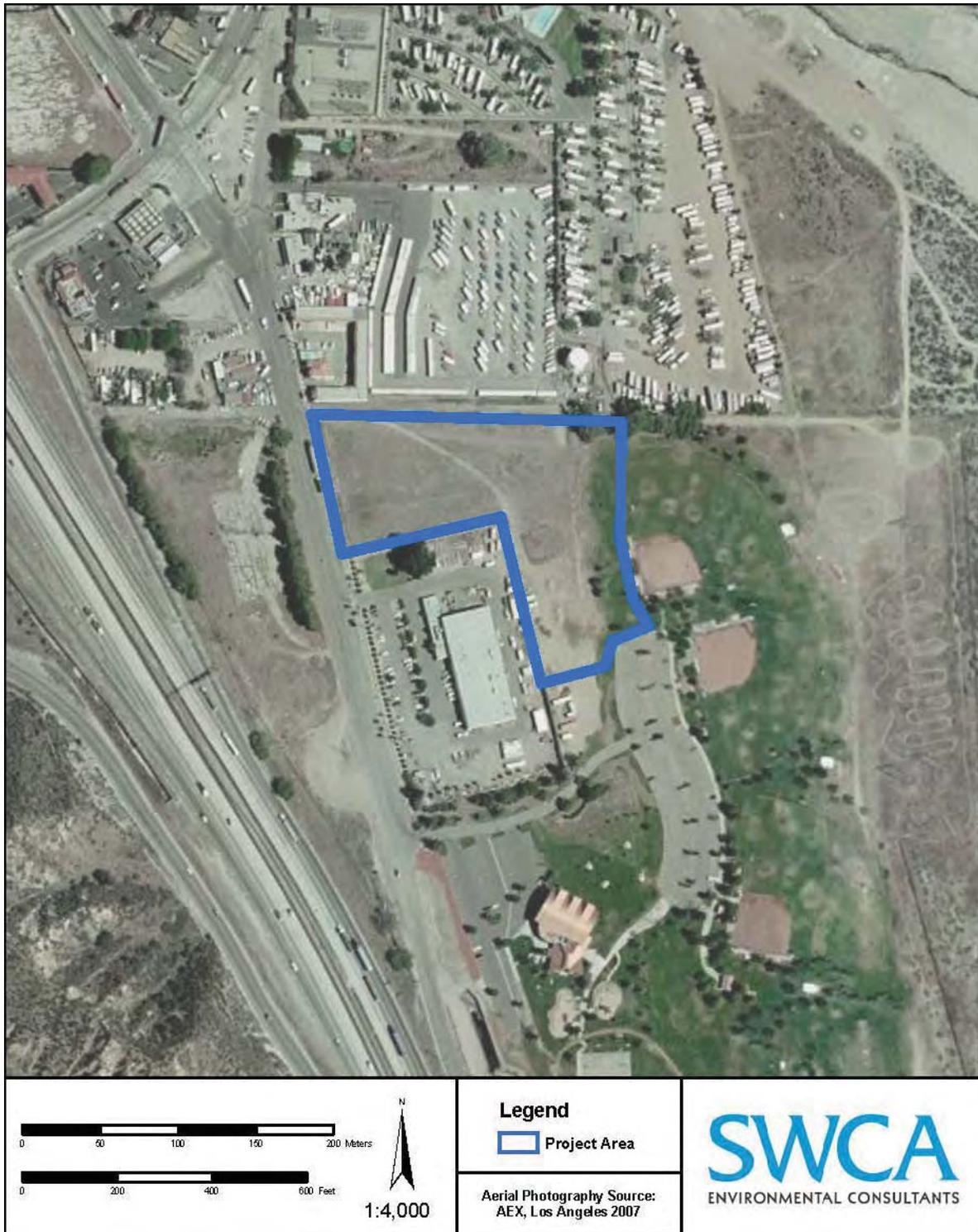


Figure 2. Aerial Photograph of Project Area

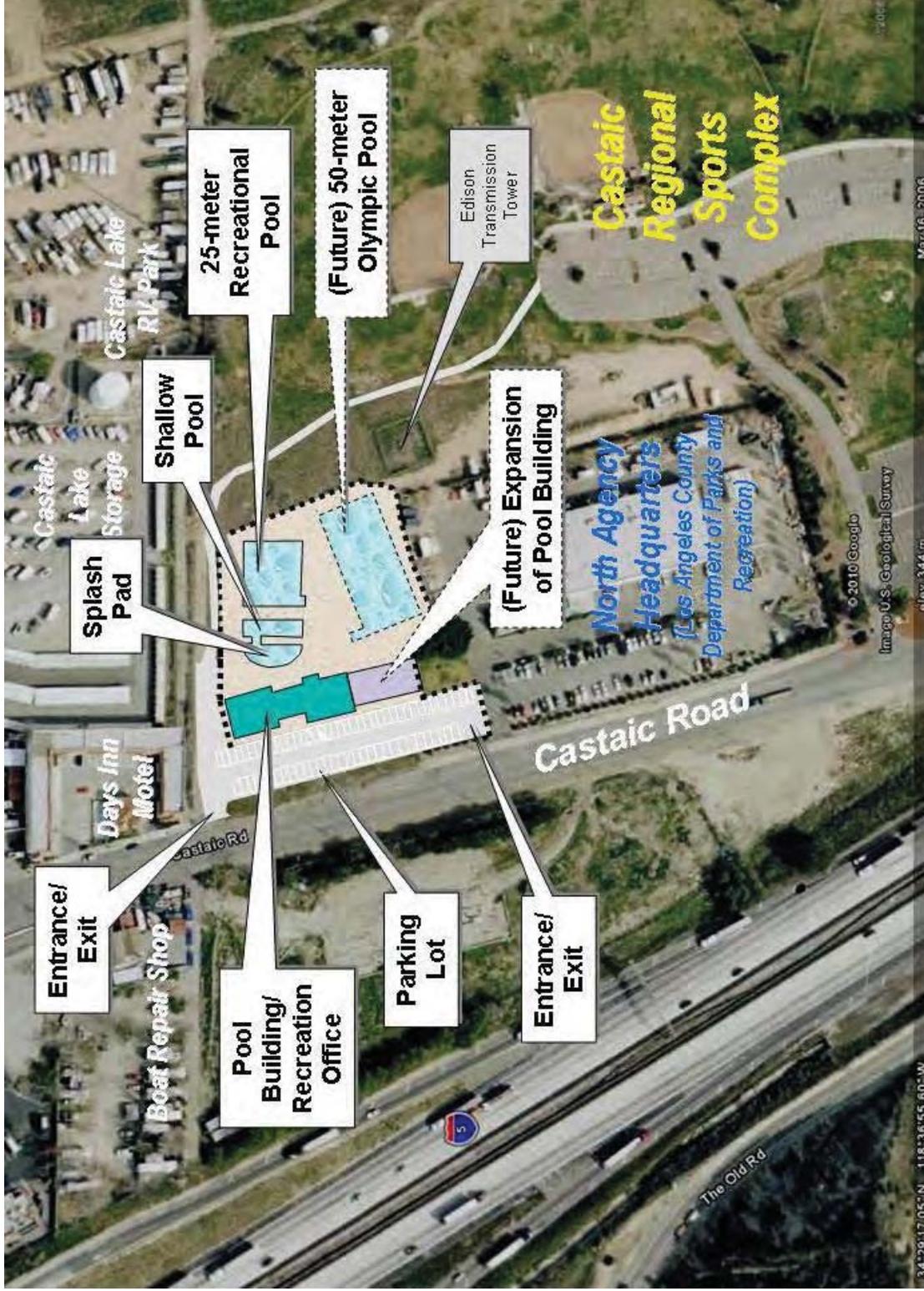


Figure 3. Proposed Site Layout for First and Second (Future) Phases of Construction¹

¹ Figure from County of Los Angeles Department of Public Works Initial Study/Mitigated Negative Declaration, Castaic Pool Complex, 2010.

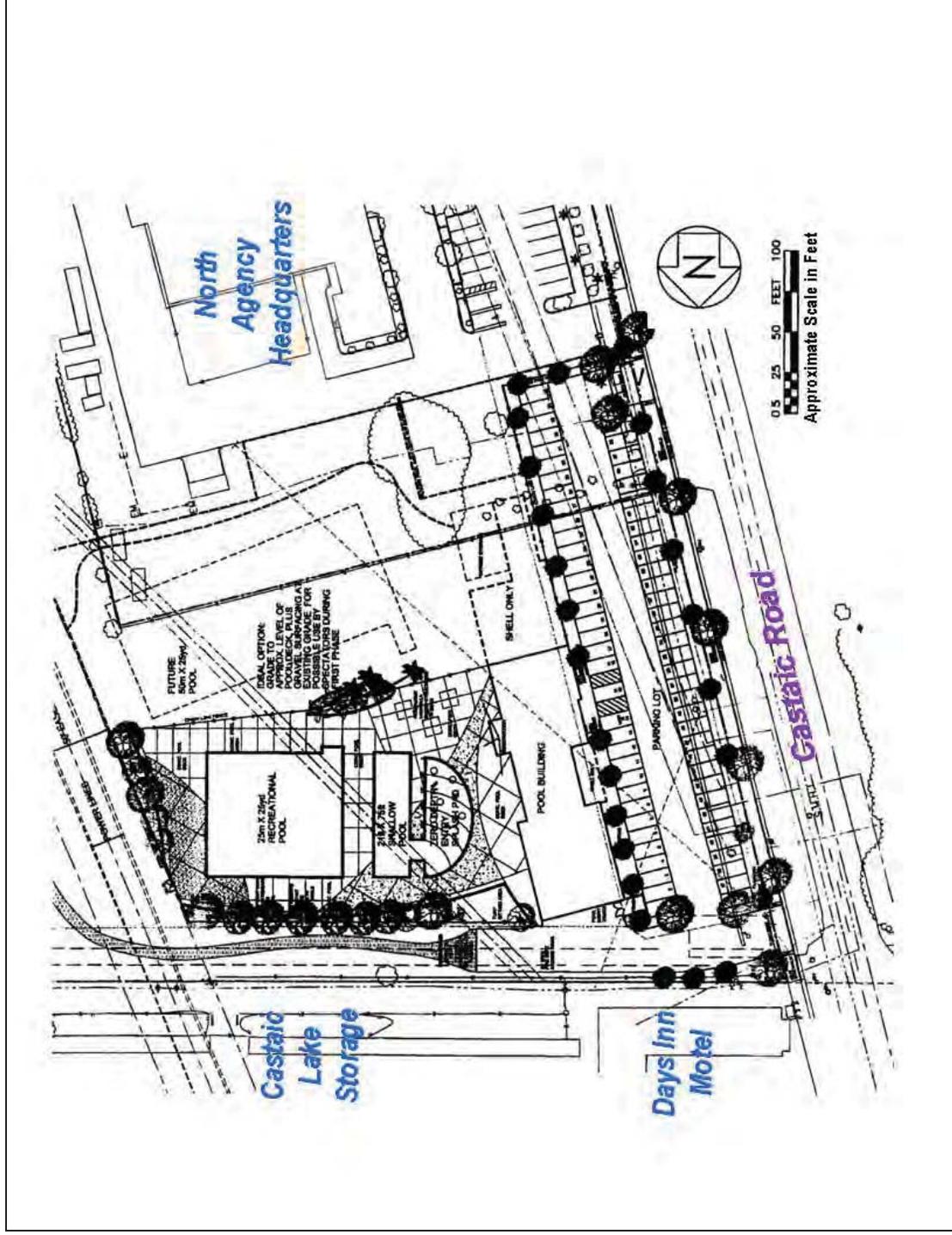


Figure 4. Conceptual Site Plan

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

This section includes a discussion of the applicable laws, ordinances, regulations, and standards governing cultural resources, which must be adhered to before and during construction of the proposed Castaic Sports Complex Pools. State and local ordinances are included.

STATE

CEQA requires a lead agency to determine whether a project may have a significant effect on historical resources. If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (Section 21083.2[a], [b], and [c]). Section 21083.2(g) describes a *unique archaeological resource* as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- 1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- 2) Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- 3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

A *historical resource* is a resource listed, or determined to be eligible for listing, in the California Register of Historical Resources (CRHR) (Section 21084.1), a resource included in a local register of historical resources (Section 15064.5[a][2]), or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (Section 15064.5[a][3]).

PRC Section 5024.1, Section 15064.5 of the Guidelines, and Sections 21083.2 and 21084.1 of the Statutes of CEQA were used as the basic guidelines for the cultural resources study. PRC Section 5024.1 requires evaluation of historical resources to determine their eligibility for listing in the CRHR. The purpose of the register is to maintain listings of the state's historical resources and to indicate which properties are to be protected from substantial adverse change. The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the National Register of Historic Places (NRHP), enumerated below.

According to PRC Section 5024.1(c)(1–4), a resource is considered historically significant if it retains “substantial integrity” and meets at least one of the following criteria:

- 1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- 2) Is associated with the lives of persons important in our past;
- 3) Embodies the distinctive characteristics of a type, period, region or method of installation, or represents the work of an important creative individual, or possesses high artistic values; or
- 4) Has yielded, or may be likely to yield, information important in prehistory or history.

Impacts to significant cultural resources that affect the characteristics of any resource that qualify it for the NRHP or adversely alter the significance of a resource listed or eligible for listing in the CRHR are considered significant effects on the environment. Impacts to significant cultural resources from the proposed project are considered significant if the project physically destroys or damages all or part of a resource, changes the character of the use of the resource or physical feature within the setting of the resource which contributes to its significance, or introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource. These impacts include “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired” (CEQA Guidelines, Section 15064.5 [b][1], 2000). Material impairment is defined as demolition or alteration “in an adverse manner [of] those characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register...” (CEQA Guidelines Section 15064.5[b][2][A]).

The disposition of burials falls first under the general prohibition on disturbing or removing human remains under California Health and Safety Code 7050.5. More specifically, remains suspected to be Native American are treated under CEQA at Section 15064.5 and cite language found at PRC Section 5097.98 that illustrates the process to be followed in the event that remains are discovered. If human remains are discovered during the construction of the proposed project, no further disturbance to the site shall occur and the Los Angeles County Coroner must be notified. If the Coroner determines the remains to be Native American, the coroner shall notify the Native American Heritage Commission (NAHC) within 48 hours. The NAHC shall identify the person or persons it believes to be the Most Likely Descendant (MLD) of the deceased. The MLD may then make recommendations as to the disposition of the remains.

LOCAL

County of Los Angeles

Historical, cultural, and paleontological resources are discussed in the County’s Conservation and Open Space Element of the draft General Plan (LADRP 2007:140). The County recognizes that historical and cultural resources are an important part of the County’s identity and contribute to the local economy. The goals and policies that apply to historical, cultural, and paleontological resources are as follows.

- **Policy C/OS 12.1:** Support an inter-jurisdictional collaborative system that protects and enhances the County’s cultural heritage resources.
- **Policy C/OS 12.2:** Support initiatives that improve the effectiveness of the Los Angeles County Landmarks Commission and the preservation of historical buildings.
- **Policy C/OS 12.3:** Ensure proper notification procedures to Native American tribes in accordance with Senate Bill 18 (2004).
- **Policy C/OS 12.4:** Promote public awareness of the County’s cultural heritage resources.

Castaic Area Community Standards District (CSD)

As stated by the Los Angeles County Department of Regional Planning (2009):

Community Standards Districts are established as supplemental districts to provide a means of implementing special development standards contained in adopted neighborhood, community, area, specific and local coastal plans within the unincorporated areas of Los Angeles County, or to provide a means of addressing

special problems which are unique to certain geographic areas within the unincorporated areas of Los Angeles County. (Ord. 93-0047 § 1, 1993; Ord. 87-0130 § 1, 1987; Ord. 83-0065 § 5, 1983; Ord. 1494 Ch. 9 Art. 5 § 905.1, 1927.)

The Castaic CSD (Ordinance No. 2004-0069) is a set of guidelines, approved by the Los Angeles County Board of Supervisors in December of 2004 that amends Title 22—Planning and Zoning of the Los Angeles County Code, to incorporate the Castaic Area CSD. The CSD establishes standards for developers, County officials, and citizens to help maintain the rural look and feel of the Castaic area throughout the course of its growth and development. The CSD also establishes the official boundaries for Castaic and its surrounding communities. As stated in Section 22.44.137.A of Ordinance 2004-0069:

The Castaic Area Community Standards District (“CSD”) is established to protect the rural character, unique appearance, and natural resources of the Castaic Area communities. The CSD also ensures that new development will be compatible with the Castaic area’s existing rural neighborhoods and with the goals of the Santa Clarita Valley Area Plan...

ENVIRONMENTAL SETTING

The project area is located within a northwestern portion of the Castaic Sports Complex at 31230 Castaic Road and includes the northern boundary of the LADPR’s North Agency Headquarters complex at 31320 Castaic Road, in the unincorporated community of Castaic, Los Angeles County, California. The project area is approximately 35 miles northwest of downtown Los Angeles and adjacently located east of Interstate 5. The project site is surrounded by commercial and manufacturing areas to the northwest, open-space recreational areas to the southeast, and single-family residential homes just west of Interstate 5. The project area is bounded by Ridge Route Road to the north, Tapia Canyon Road to the South, Castaic Road to the west, and the Castaic Creek to the east.

NATURAL SETTING

The project area is situated within the Soledad Basin, a primarily non-marine eastern extension of the Ventura Basin located within the central Transverse Ranges geomorphic province. The Soledad Basin extends from near the San Gabriel Fault to almost 30 miles east and is about 10 miles north to south (Muehlberger, 1958). Its topography is dominated by rough, hilly terrain, and its major drainage is the Santa Clara River and its tributaries. The Soledad Basin contains middle and late Cenozoic non-marine sedimentary rocks overlying the crystalline basement of the San Gabriel Mountains to the south and the Sierra Pelona to the north (Norris and Webb, 1976).

More specifically, the proposed project is located in a northwest portion of the greater Santa Clarita Valley in an unincorporated portion of Los Angeles County, on the northern side of the Traverse Range. The project area is situated on the eastern side of an area known as the Castaic Valley. Other major geologic features near the project area include the Sierra Pelona and Liebre Mountains to the north, the Santa Susana Mountains to the southwest, and the San Gabriel Mountains to the southeast. The nearest water source is the Castaic Creek, located approximately one-quarter of a mile east of the project area. Castaic Creek is a 23-mile long tributary of the Santa Clara River that flows south through the Castaic Valley and enters the Santa Clara River just east of Del Valle (Bell 1978). The Santa Clara River is located approximately 2.5 miles south of the project area.

The project area is at an elevation of approximately 1,130 to 1,133 feet above mean sea level (amsl). The ground is generally flat and has been disturbed previously by grading. Vegetation is limited to nonnative grasses and some ornamental landscaping. Although the project area has been heavily modified by previous grading, regular mowing, and other landscaping, the project area may be generally be classified

by the following predominant natural plant communities: chamise series on shallow and very stony soils, mixed chaparral shrublands, California sage brush series, coast live oak series, and nonnative grasslands (Miles and Goudy 1997). The climate in Castaic is described as warm and dry, like most of inland southern California. Average annual rainfall for this area is approximately 12-20 inches.

A soil compaction report was prepared by Southwest Geotechnical, Inc., in September 2009. Compaction testing was performed during grading operations (trench backfill) within the project area within the easement of an abandoned gas line that is to be removed. The results indicate that fill soil within the project area is classified as sandy/granular and consists of gray-brown silty sand, brown silty sand with some gravel, dark gray silty sand, and imported brown silty sand with gravel (Miscione 2009:2-3).

The geotechnical evaluation prepared for the proposed project indicates that the exploratory boring samples collected generally consist of “alluvial deposits with some shallow fill soils” (Ninyo & Moore 2010). Fill soils were encountered to depths of 5 to 5½ feet below ground surface in three boring locations just east of Castaic Road, and to a depth of 3 feet at two boring locations in the southeastern corner of the project area. According to Ninyo & Moore (2010:5):

Fill soils were generally comprised [sic] of very loose to medium dense, clayey and silty sand. Based on a review of a compaction report by Southwest Geotechnical, an abandoned pipeline near the center of the site was removed to a depth of approximately 7 feet and backfilled with compacted silty sand with some gravel to a reported 95 percent relative compaction (Southwest Geotechnical, Inc., 2009). The report states that the fill soils were compacted but not intended for support of structures.

Alluvial deposits were encountered beneath the fill soil and at other boring locations to the depths explored up to approximately 71½ feet. In general, the alluvium consisted of interbedded lenses of loose to very dense, clayey and silty sand, poorly graded sand, poorly graded sand with silt, and well graded sand. Layers of firm to very stiff sandy clay were also encountered at the boring locations. Varying amounts of gravel and cobbles were present in the alluvium.”

The results of the soil compaction testing and geotechnical evaluation indicate that there is a low potential for encountering undisturbed subsurface archaeological materials along the abandoned gas line alignment that bisects the project area or in the area where the parking lot is proposed.

CULTURAL SETTING

PREHISTORIC OVERVIEW

Numerous chronological sequences have been devised to aid in understanding cultural changes within southern California. Building on early studies and focusing on data synthesis, Wallace (1955, 1978) developed a prehistoric chronology for the southern California coastal region that is still widely used today and is applicable to near-coastal and many inland areas. Four periods are presented in Wallace’s prehistoric sequence: Early Man, Milling Stone, Intermediate, and Late Prehistoric. Although Wallace’s (1955) synthesis initially lacked chronological precision due to a paucity of absolute dates (Moratto 1984:159), this situation has been alleviated by the availability of thousands of radiocarbon dates that have been obtained by southern California researchers in the last three decades (Byrd and Raab 2007:217). Several revisions have been made to Wallace’s (1955) synthesis using radiocarbon dates and projectile point assemblages (e.g., Koerper and Drover 1983; Mason and Peterson 1994; Koerper et al. 2002).

Horizon I–Early Man (ca. 10,000–6,000 B.C.)

When Wallace defined the Horizon I (Early Man) period in the mid-1950s, there was little evidence of human presence on the southern California coast prior to 6000 B.C. Archaeological work in the intervening years has identified numerous pre-8000 B.C. sites, both on the mainland coast and the Channel Islands (e.g., Erlandson 1991; Johnson et al. 2002; Moratto 1984; Rick et al. 2001:609). The earliest accepted dates for occupation are from two of the northern Channel Islands, located off the coast of Santa Barbara. On San Miguel Island, Daisy Cave clearly establishes the presence of people in this area about 10,000 years ago (Erlandson 1991:105). On Santa Rosa Island, human remains have been dated from the Arlington Springs site to approximately 13,000 years ago (Johnson et al. 2002). Present-day Orange and San Diego counties contain several sites dating to 9,000 to 10,000 years ago (Byrd and Raab 2007:219; Macko 1998a:41; Mason and Peterson 1994:55–57; Sawyer and Koerper 2006). Known sites dating to the Early Man period are rare in western Riverside County. One exception is the Elsinore site (CA-RIV-2798-B), which has deposits dating as early as 6630 calibrated B.C. (Grenda 1997:260).

Recent data from Horizon I sites indicate that the economy was a diverse mixture of hunting and gathering, with a major emphasis on aquatic resources in many coastal areas (e.g., Jones et al. 2002) and on Pleistocene lakeshores in eastern San Diego County (see Moratto 1984:90–92). Although few Clovis-like or Folsom-like fluted points have been found in southern California (e.g., Dillon 2002; Erlandson et al. 1987), it is generally thought that the emphasis on hunting may have been greater during Horizon I than in later periods. Common elements in many sites from this period, for example, include leaf-shaped bifacial projectile points and knives, stemmed or shouldered projectile points, scrapers, engraving tools, and crescents (Wallace 1978:26–27). Subsistence patterns shifted around 6000 B.C. coincident with the gradual desiccation associated with the onset of the Altithermal climatic regime, a warm and dry period that lasted for about 3,000 years. After 6000 B.C., a greater emphasis was placed on plant foods and small animals.

Horizon II–Milling Stone (6000–3000 B.C.)

The Milling Stone Horizon of Wallace (1955, 1978) and Encinitas Tradition of Warren (1968) (6000–3000 B.C.) are characterized by subsistence strategies centered on collecting plant foods and small animals. Food procurement activities included hunting small and large terrestrial mammals, sea mammals, and birds; collecting shellfish and other shore species; near-shore fishing with barbs or gorges; the processing of yucca and agave; and the extensive use of seed and plant products (Kowta 1969; Reinman 1964). The importance of the seed processing is apparent in the dominance of stone grinding implements in contemporary archaeological assemblages, namely milling stones (metates and slabs) and handstones (manos and mullers). Milling stones occur in large numbers for the first time during this period and are more numerous still near the end of this period. Recent research indicates that Milling Stone Horizon food procurement strategies varied in both time and space, reflecting divergent responses to variable coastal and inland environmental conditions (Byrd and Raab 2007:220).

Milling Stone Horizon sites are common in the southern California coastal region between Santa Barbara and San Diego, and at many inland locations, including the Prado Basin in western Riverside County and the Pauma Valley in northeastern San Diego County (e.g., Herring 1968; Langenwalter and Brock 1985; Sawyer and Brock 1999; Sutton 1993; True 1958). Wallace (1955, 1978) and Warren (1968) relied on several key coastal sites to characterize the Milling Stone period and Encinitas Tradition, respectively. These include the Oak Grove Complex in the Santa Barbara region, Little Sycamore in southwestern Ventura County, Topanga Canyon in the Santa Monica Mountains, and La Jolla in San Diego County. The well-known Irvine site (CA-ORA-64) has occupation levels dating between ca. 6000 and 4000 B.C. (Drover et al. 1983; Macko 1998b).

Stone chopping, scraping, and cutting tools made from locally available raw material are abundant in Milling Stone/Encinitas deposits. Less common are projectile points, which are typically large and leaf-

shaped, and bone tools such as awls. Items made from shell, including beads, pendants, and abalone dishes, are generally rare. Evidence of weaving or basketry is present at a few sites. Kowta (1969) attributes the presence of numerous scraper-planes in Milling Stone sites to the preparation of agave or yucca for food or fiber. The mortar and pestle, associated with pounding foods such as acorns, were first used during the Milling Stone Horizon (Wallace 1955, 1978; Warren 1968).

Cogged stones and discoidals are diagnostic Milling Stone period artifacts, and most specimens have been found within sites dating between 4000 and 1000 B.C. (Moratto 1984:149). The cogged stone is a ground stone object with gear-like teeth on its perimeter. Discoidals are similar to cogged stones, differing primarily in their lack of edge modification. Discoidals are found in the archaeological record subsequent to the introduction of the cogged stone. Cogged stones and discoidals are often purposefully buried, and are found mainly in sites along the coastal drainages from southern Ventura County southward, with a few specimens inland at Cajon Pass, and heavily in Orange County (Dixon 1968:63; Moratto 1984:149). These artifacts are often interpreted as ritual objects (Eberhart 1961:367; Dixon 1968:64–65), although alternative interpretations (such as gaming stones) have also been put forward (e.g., Moriarty and Broms 1971).

Characteristic mortuary practices of the Milling Stone period or Encinitas Tradition include extended and loosely flexed burials, some with red ochre, and few grave goods such as shell beads and milling stones interred beneath cobble or milling stone cairns. “Killed” milling stones, exhibiting holes, may occur in the cairns. Reburials are common in the Los Angeles County area, with north-oriented flexed burials common in Orange and San Diego counties (Wallace 1955, 1978; Warren 1968).

Koerper and Drover (1983) suggest that Milling Stone period sites represent evidence of migratory hunters and gatherers who used marine resources in the winter and inland resources for the remainder of the year. Subsequent research indicates greater sedentism than previously recognized. Evidence of wattle-and-daub structures and walls has been identified at several sites in the San Joaquin Hills and Newport Coast area (Mason et al. 1991, 1992, 1993; Koerper 1995; Strudwick 2005; Sawyer 2006), while numerous early house pits have been discovered on San Clemente Island (Byrd and Raab 2007:221–222). This architectural evidence and seasonality studies suggest semi-permanent residential base camps that were relocated seasonally (de Barros 1996; Koerper et al. 2002; Mason et al. 1997) or permanent villages from which a portion of the population left at certain times of the year to exploit available resources (Cottrell and Del Chario 1981).

Horizon III–Intermediate (3000 B.C.–A.D. 500)

Following the Milling Stone Horizon, Wallace’s Intermediate Horizon and Warren’s Campbell Tradition in Santa Barbara, Ventura, and parts of Los Angeles counties, date from approximately 3000 B.C. to A.D. 500 and are characterized by a shift toward a hunting and maritime subsistence strategy, along with a wider use of plant foods. The Campbell Tradition (Warren 1968) incorporates David B. Rogers’ (1929) Hunting Culture and related expressions along the Santa Barbara coast. In the San Diego region, the Encinitas Tradition (Warren 1968) and the La Jolla Culture (Moriarty 1966; Rogers 1939, 1945) persist with little change during this time.

During the Intermediate Horizon and Campbell Tradition, there was a pronounced trend toward greater adaptation to regional or local resources. For example, an increasing variety and abundance of fish, land mammal, and sea mammal remains are found in sites along the California coast during this period. Related chipped stone tools suitable for hunting are more abundant and diversified, and shell fishhooks become part of the tool kit during this period. Larger knives, a variety of flake scrapers, and drill-like implements are common during this period. Projectile points include large side-notched, stemmed, and lanceolate or leaf-shaped forms. Koerper and Drover (1983) consider Gypsum Cave and Elko series points, which have a wide distribution in the Great Basin and Mojave deserts between ca. 2000 B.C. and

A.D. 500, to be diagnostic of this period. Bone tools, including awls, were more numerous than in the preceding period, and the use of asphaltum adhesive was common.

Mortars and pestles became more common during this period, gradually replacing manos and metates as the dominant milling equipment. Hopper mortars and stone bowls, including steatite vessels, appeared in the tool kit at this time as well. This shift appears to correlate with the diversification in subsistence resources. Many archaeologists believe this change in milling stones signals a shift away from the processing and consuming of hard seed resources to the increasing importance of the acorn (e.g., Glassow et al. 1988; True 1993). It has been argued that mortars and pestles may have been used initially to process roots (e.g., tubers, bulbs, and corms associated with marshland plants), with acorn processing beginning at a later point in prehistory (Glassow 1997:86) and continuing to European contact.

Characteristic mortuary practices during the Intermediate Horizon and Campbell Tradition included fully flexed burials, placed facedown or faceup, and oriented toward the north or west (Warren 1968:2–3). Red ochre was common, and abalone shell dishes were infrequent. Interments sometimes occurred beneath cairns or broken artifacts. Shell, bone, and stone ornaments, including charmstones, were more common than in the preceding Encinitas Tradition. Some later sites include *Olivella* shell and steatite beads, mortars with flat bases and flaring sides, and a few small points. The broad distribution of steatite from the Channel Islands and obsidian from distant inland regions, among other items, attest to the growth of trade, particularly during the later part of this period. Recently, Raab and others (Byrd and Raab 2007:220–221) have argued that the distribution of *Olivella* grooved rectangle (OGR) beads marks “a discrete sphere of trade and interaction between the Mojave Desert and the southern Channel Islands.”

Horizon IV–Late Prehistoric (A.D. 500–Historic Contact)

In the Late Prehistoric Horizon (Wallace 1955, 1978), which lasted from the end of the Intermediate (ca. A.D. 500) until European contact, there was an increase in the use of plant food resources in addition to an increase in land and sea mammal hunting. There was a concomitant increase in the diversity and complexity of material culture during the Late Prehistoric, demonstrated by more classes of artifacts. The recovery of a greater number of small, finely chipped projectile points, usually stemless with convex or concave bases, suggests an increased usage of the bow and arrow rather than the atlatl (spear thrower) and dart for hunting. Other items include steatite cooking vessels and containers, the increased presence of smaller bone and shell circular fishhooks, perforated stones, arrow shaft straighteners made of steatite, a variety of bone tools, and personal ornaments made from shell, bone, and stone. There is also an increased use of asphalt for waterproofing and as an adhesive.

Many Late Prehistoric sites contain beautiful and complex objects of utility, art, and decoration. Ornaments include drilled whole venus clam (*Chione* spp.) and drilled abalone (*Haliotis* spp.). Steatite effigies become more common, with scallop (*Pecten* spp. and *Argopecten* spp.) shell rattles common in middens. Mortuary customs are elaborate and include cremation and interment with abundant grave goods. By A.D. 1000, fired clay smoking pipes and ceramic vessels began to appear at some sites (Drover 1971, 1975; Meighan 1954; Warren and True 1984). The scarcity of pottery in coastal and near-coastal sites implies ceramic technology was not well developed in that area, or that ceramics were obtained by trade with neighboring groups to the south and east. The lack of widespread pottery manufacture is usually attributed to the high quality of tightly woven and watertight basketry that functioned in the same capacity as ceramic vessels.

Another feature typical of Late Prehistoric period occupation is an increase in the frequency of obsidian imported from the Obsidian Butte source in Imperial County, California. Obsidian Butte was exploited after ca. A.D. 1000 when it was exposed by the receding waters of Holocene Lake Cahuilla (Wilke 1978). A Late Prehistoric period component of the Elsinore site (CA-RIV-2798-A) produced two flakes that originated from Obsidian Butte (Grenda 1997:255; Towner et al. 1997:224–225). Although about

16 percent of the debitage at the Peppertree site (CA-RIV-463) at Perris Reservoir is obsidian, no sourcing study was done (Wilke 1974:61). The site contains a late Intermediate to Late Prehistoric period component, and it is assumed that most of the obsidian originated from Obsidian Butte. In the earlier Milling Stone and Intermediate periods, most of the obsidian found at sites within Orange County and many inland areas came from northern sources, mostly the Coso volcanic field. This also appears to be the case within Prado Basin and other interior sites that have yielded obsidian (e.g., Grenda 1995:59; Taşkıran 1997:46). The presence of Grimes Canyon (Ventura County) fused shale at southern California archaeological sites is also thought to be typical of the Late Prehistoric period (Demcak 1981; Hall 1988).

During this period, there was an increase in population size accompanied by the advent of larger, more permanent villages (Wallace 1955:223). Large populations and, in places, high population densities are characteristic, with some coastal and near-coastal settlements containing as many as 1,500 people. Many of the larger settlements were permanent villages in which people resided year-round. The populations of these villages may have also increased seasonally.

In Warren's (1968) cultural ecological scheme, the period between A.D. 500 and European contact is divided into three regional patterns. The Chumash Tradition is present mainly in the region of Santa Barbara and Ventura counties; the Takic or Numic Tradition is present in the Los Angeles, Orange, and western Riverside counties region; and the Yuman Tradition is present in the San Diego region. The seemingly abrupt changes in material culture, burial practices, and subsistence focus at the beginning of the Late Prehistoric period are thought to be the result of a migration to the coast of peoples from inland desert regions to the east. In addition to the small triangular and triangular side-notched points similar to those found in the desert regions in the Great Basin and Lower Colorado River, Colorado River pottery and the introduction of cremation in the archaeological record are diagnostic of the Yuman Tradition in the San Diego region. This combination certainly suggests a strong influence from the Colorado Desert region.

In Los Angeles, Orange, and western Riverside counties, similar changes (introduction of cremation, pottery, and small triangular arrow points) are thought to be the result of a Takic migration to the coast from inland desert regions. This Takic or Numic Tradition was formerly referred to as the "Shoshonean wedge" or "Shoshonean intrusion" (Warren 1968). This terminology, used originally to describe a Uto-Aztecan language group, is generally no longer used to avoid confusion with ethnohistoric and modern Shoshonean groups who spoke Numic languages (Heizer 1978:5; Shipley 1978:88, 90). Modern Gabrielino/Tongva, Juaneño, and Luiseño in this region are considered the descendants of the prehistoric Uto-Aztecan, Takic-speaking populations who settled along the California coast during this period or perhaps somewhat earlier.

ETHNOGRAPHIC OVERVIEW

Historically, tribal boundaries in southern California were not established definitively and were considered to be fluid, because of either sociopolitical features or a lack of reliable data (Bean and Smith 1978). Although the project area falls within the Tataviam/Alliklik tribal boundaries delineated by Bean and Smith (1978), the Kitanemuk, Chumash, and Gabrielino/Tongva have occupied territories in the surrounding areas. The following section discusses each individual native group, their location and habitation trends within southern California. A discussion of the material culture of the Gabrielino/Tongva, which is typical of all of the groups, is provided in that section.

Tataviam

The Tataviam territories included the upper reaches of the Santa Clara River drainage east of Piru Creek, but also encompassed the Sawmill Mountains to the north and the southwestern portion of the Antelope Valley. There are different hypotheses in regards to the affiliation of the Tataviam language. Scholars

hypothesize that the Tataviam may have spoken a language that was uncommonly used in Southern California, or that they may have spoken a Takic language like their southern neighbors (King and Blackburn 1978). As with most languages, the Takic dialects may have been more noticeable at the geographic extremes, while in actuality there was likely a continuum of slight sound and synonym shifts from one community to the next. One scholar has suggested that the northern edge of Western Tongva lands were home to the Tataviam Takic speakers, a related but separate language from Northern Takic (Mithun 1999:539).

Kitanemuk

The Kitanemuk are one of the least-known ethnographic groups in California, despite being considered by researchers as the main aboriginal inhabitants of Antelope Valley (Sutton 1979, 1987). Kitanemuk territory extended from the Tehachapi Mountains at the northwestern edge of the Antelope Valley southeast to beyond Rosamond Lake, although their populations were densest in the mountains at the southern end of the San Joaquin Valley (Blackburn and Bean 1978:564; Kroeber 1925:611). Like the Kawaiisu, the Kitanemuk were primarily mountain dwellers who lived in semi-permanent village sites that functioned as year-round base camps; during the late winter and early spring expeditions ventured onto the desert floor in pursuit of available seasonal resources (Earle 1997).

Kroeber (1925:611) notes that the Kitanemuk were a subdivision of the Serrano, and thus spoke a language of the Takic family that was similar to dialects spoken by groups living as far south and east as Yucca Valley and Twentynine Palms. Although some aspects of Kitanemuk social organization are similar to those of other Takic speaking groups, Blackburn and Bean (1978:564) argue that Kitanemuk ritual, mythology, and shamanism were most strongly shaped by their neighbors to the north (Kawaiisu and Tubatulabal) and west (Chumash). The Kitanemuk appear to have enjoyed particularly strong trade ties with coastal and inland Chumash groups (Blackburn and Bean 1978:564; Kroeber 1925:613)

Modern-day descendants of the Kitanemuk live at the Tule River Reservation, Porterville, and Tejon Ranch (Four Directions Institute 2010).

Chumash

Chumash territory traditionally included the region from San Luis Obispo to Malibu Canyon on the coast and inland to the western edge of the San Joaquin Valley. Chumash territory also extended westward to the northern Santa Barbara Channel Islands, including San Miguel, Santa Rosa, Santa Cruz, and Anacapa. There were believed to be at least six different Chumash languages spoken within these territories; Ventureño, Barbareño, Ynezeño, Purisimeño, Obispeño, and the Island language; however, it is not possible to verify any Chumash linguistic data since the death of Mary Yee, the last native speaker of Barbareño, in 1965.

Of these six groups, the Ventureño Chumash were thought to have occupied the region closest to the project area (Grant 1978). The Ventureño's western boundary was just east of the headwaters of the Santa Ynez and Cuyama rivers, encompassing the Oxnard Plain. Located at the southern extent of Chumash territory, the Ventureño were in contact with the Western Tongva, the people who occupied the region to the east (Bean and Smith 1978:547). The border between the Ventureño and Western Tongva was not well defined, and both groups near the boundary appear to have shared cultural traits with each other. More detailed work with the sacramental registers at Mission San Fernando has identified a number of people from previously identified "Tongva" villages in the western San Fernando Valley with identifiably Chumash names. Recent detailed analysis of the Mission San Fernando records have led to the realization that some Chumash villages may have been recorded under their Tongva names (King and Johnson 1999).

Gabrielino/Tongva

The name Gabrielino denotes those people who were subjugated by the Spanish from Mission San Gabriel, which included people from the Gabrielino proper, as well as other social groups (Bean and Smith 1978; Kroeber 1925). Therefore, in the post-Contact period, the name does not necessarily identify a specific ethnic or tribal group. The names Native Americans in southern California used to identify themselves have, for the most part, been lost. Many modern-day Gabrielino identify themselves as descendents of the indigenous people living across the plains of the Los Angeles Basin and refer to themselves as the *Tongva*.

The Gabrielino language, as well as that of the Juaneño and Luiseño to the south, was derived from the Takic family, part of the Uto-Aztecan linguistic stock, which can be traced to the Great Basin area (Mithun 1999:539). This language group represents an origin quite different from that of the Chumash to the north and the Ipai and Tipai further south. The language of the Ipai and Tipai is derived from the Hokan stock of the Yuman language family originating in the American Southwest. The Chumash language is unlike both the Hokan and Uto-Aztecan stocks, and may represent a separate lineage (Mithun 1999:390). Linguistic analysis suggests that Takic-speaking immigrants from the Great Basin area began moving into southern California around 500 B.C. (Kroeber 1925:579). This migration may have displaced both Chumashan- and Yuman-speaking peoples. The timing and extent of the migrations and their impact on indigenous peoples is not well understood, and any data related to it represent valuable contributions to the understanding of local prehistory.

Gabrielino lands encompassed the greater Los Angeles Basin and three Channel Islands, San Clemente, San Nicolas, and Santa Catalina. Inland, their territory was bounded on the north by the Chumash at Topanga Creek, the Serrano at the San Gabriel Mountains in the east, and the Juaneño on the south at Aliso Creek (Bean and Smith 1978:538; Kroeber 1925:636). This southern boundary of Gabrielino territory at Aliso Creek was recorded based on anthropological fieldwork conducted by Kroeber in 1907 (Kroeber 1925), and the Juaneño currently dispute the defined northern boundary of their lands with the Gabrielino at Aliso Creek.

The Tongva established large, permanent villages in the fertile lowlands along rivers and streams, and in sheltered areas along the coast, stretching from the foothills of the San Gabriel Mountains to the Pacific Ocean. A total tribal population has been estimated of at least 5,000 (Bean and Smith 1978:540), but recent ethnohistoric work suggests a number approaching 10,000 seems more likely (O'Neil 2002).

Houses constructed by the Tongva were large, circular, domed structures made of willow poles thatched with tule that could hold up to 50 people (Bean and Smith 1978). Other structures served as sweathouses, menstrual huts, ceremonial enclosures, and probably communal granaries. Cleared fields for races and games, such as lacrosse and pole throwing, were created adjacent to Tongva villages (McCawley 1996:27). Archaeological sites composed of villages with various sized structures have been identified.

The fundamental economy of the Tongva was one of subsistence gathering and hunting. The surrounding environment was rich and varied, and the tribe exploited mountains, foothills, valleys, deserts, riparian areas, estuarine areas, and open and rocky coastal eco-niches. Like that of most native Californians, acorns were the staple food (an established industry by the time of the early Intermediate Period). Acorns were supplemented by the roots, leaves, seeds, and fruits of a wide variety of flora (e.g., islay, *Opuntia*, yucca, sages, and agave). Fresh- and saltwater fish, shellfish, birds, reptiles, and insects, as well as large and small mammals, were also consumed.

A wide variety of tools and implements were used by the Tongva to gather and collect food resources. These included the bow and arrow, traps, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks. Groups residing near the ocean used oceangoing plank canoes and tule balsa canoes for fishing, travel, and trade between the mainland and the Channel Islands (McCawley 1996:7).

Foods were processed with a variety of tools, including hammerstones and anvils, mortars and pestles, manos and metates, strainers, leaching baskets and bowls, knives, bone saws, and wooden drying racks. Food was consumed from a variety of vessels. Catalina Island steatite was used to make ollas and cooking vessels (Kroeber 1925:629).

At the time of Spanish contact, the basis of Tongva religious life was the Chinigchinich cult, centered on the last of a series of heroic mythological figures. Chinigchinich gave instruction on laws and institutions, and also taught the people how to dance, the primary religious act for this society. He later withdrew into heaven, where he rewarded the faithful and punished those who disobeyed his laws (Kroeber 1925:637–638). The Chinigchinich religion seems to have been relatively new when the Spanish arrived, and was spreading south into the Southern Takic groups even as Christian missionization was taking place, and may have been influenced by Christianity.

Deceased Tongva were either buried or cremated (Harrington 1942; McCawley 1996). During the Contact Period, cremation was the standard practice for the mainland Tongva. Cremation ashes have been found in archaeological contexts buried within stone bowls and in shell dishes (Ashby and Winterbourne 1966:27). Archaeological and ethnographic data describe a wide variety of grave offerings, including seeds, stone grinding tools, otter skins, baskets, wood tools, shell beads, bone and shell ornaments, and projectile points and knives. Offerings varied with the sex and status of the deceased. Graves were sometimes marked, and in the San Pedro area headstones or boards were etched with figures.

HISTORIC OVERVIEW

Post-Contact history for the state of California is generally divided into three periods: the Spanish Period (1769–1822), Mexican Period (1822–1848), and American Period (1848–present). Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California begins with the establishment in 1769 of a settlement at San Diego and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain in 1821 marks the beginning of the Mexican Period, and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican-American War, signals the beginning of the American Period, when California became a territory of the United States.

Spanish Period (1769–1822)

Spanish explorers made sailing expeditions along the coast of southern California between the mid-1500s and mid-1700s. In search of the legendary Northwest Passage, Juan Rodríguez Cabrillo stopped in 1542 at present-day San Diego Bay. With his crew, Cabrillo explored the shorelines of present Catalina Island as well as San Pedro and Santa Monica bays. Much of the present California and Oregon coastline was mapped and recorded in the next half-century by Spanish naval officer Sebastián Vizcaíno. Vizcaíno's crew also landed on Santa Catalina Island and at San Pedro and Santa Monica bays, giving each location its long-standing name. The Spanish crown laid claim to California based on the surveys conducted by Cabrillo and Vizcaíno (Bancroft 1885:96–99; Gumprecht 1999:35).

More than 200 years passed before Spain began the colonization and inland exploration of Alta California. The 1769 overland expedition by Captain Gaspar de Portolà marks the beginning of California's Historic period, occurring just after the king of Spain installed the Franciscan Order to direct religious and colonization matters in assigned territories of the Americas. With a band of 64 soldiers, missionaries, Baja (lower) California Native Americans, and Mexican civilians, Portolà established the Presidio of San Diego, a fortified military outpost, as the first Spanish settlement in Alta California. In July of 1769, while Portolà was exploring southern California, Franciscan Fr. Junípero Serra founded Mission San Diego de Alcalá at Presidio Hill, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823.

The Portolà expedition first reached the present-day boundaries of Los Angeles in August 1769, thereby becoming the first Europeans to visit the area. Father Crespi named “the campsite by the river Nuestra Señora la Reina de los Angeles de la Porciúncula” or “Our Lady the Queen of the Angeles of the Porciúncula.” Two years later, Friar Junípero Serra returned to the valley to establish a Catholic mission, the Mission San Gabriel Arcángel, on September 8, 1771 (Kyle 2002:151).

Mexican Period (1822–1848)

A major emphasis during the Spanish Period in California was the construction of missions and associated presidios to integrate the Native American population into Christianity and communal enterprise. Incentives were also provided to bring settlers to pueblos or towns, but just three pueblos were established during the Spanish Period, only two of which were successful and remain as California cities (San José and Los Angeles). Several factors kept growth within Alta California to a minimum, including the threat of foreign invasion, political dissatisfaction, and unrest among the indigenous population. After more than a decade of intermittent rebellion and warfare, New Spain (Mexico and the California territory) won independence from Spain in 1821. In 1822, the Mexican legislative body in California ended isolationist policies designed to protect the Spanish monopoly on trade, and decreed California ports open to foreign merchants (Dallas 1955:14).

Extensive land grants were established in the interior during the Mexican Period, in part to increase the population inland from the more settled coastal areas where the Spanish had first concentrated their colonization efforts. Nine ranchos were granted between 1837 and 1846 in the future Orange County (Middlebrook 2005). Among the first ranchos deeded within the future Orange County were Manuel Nieto’s Rancho Las Bolsas (partially in future Los Angeles County), granted by Spanish Governor Pedro Fages in 1784, and the Rancho Santiago de Santa Ana, granted by Governor José Joaquín Arrillaga to José Antonio Yorba and Juan Pablo Peralta in 1810 (Hallan-Gibson 1986). The secularization of the missions following Mexico’s independence from Spain resulted in the subdivision of former mission lands and establishment of many additional ranchos.

During the supremacy of the ranchos (1834–1848), landowners largely focused on the cattle industry and devoted large tracts to grazing. Cattle hides became a primary southern California export, providing a commodity to trade for goods from the east and other areas in the United States and Mexico. The number of nonnative inhabitants increased during this period because of the influx of explorers, trappers, and ranchers associated with the land grants. The rising California population contributed to the introduction and rise of diseases foreign to the Native American population, who had no associated immunities.

American Period (1848–Present)

War in 1846 between Mexico and the United States precipitated the Battle of Chino, a clash between resident Californios and Americans in the San Bernardino area. The Mexican-American War ended with the Treaty of Guadalupe Hidalgo in 1848, ushering California into its American Period.

California officially became a state with the Compromise of 1850, which also designated Utah and New Mexico (with present-day Arizona) as U.S. Territories (Waugh 2003). Horticulture and livestock, based primarily on cattle as the currency and staple of the rancho system, continued to dominate the southern California economy through 1850s. The Gold Rush began in 1848, and with the influx of people seeking gold, cattle were no longer desired mainly for their hides but also as a source of meat and other goods. During the 1850s cattle boom, rancho vaqueros drove large herds from southern to northern California to feed that region’s burgeoning mining and commercial boom. Cattle were at first driven along major trails or roads such as the Gila Trail or Southern Overland Trail, then were transported by trains when available. The cattle boom ended for southern California as neighbor states and territories drove herds to northern

California at reduced prices. Operation of the huge ranchos became increasingly difficult, and droughts severely reduced their productivity (Cleland 2005:102–103).

In 1781, a group of 11 Mexican families traveled from Mission San Gabriel Arcángel to establish a new pueblo called El Pueblo de la Reyna de Los Angeles (The Pueblo of the Queen of the Angels). This settlement consisted of a small group of adobe-brick houses and streets and would eventually be known as the Ciudad de Los Angeles (City of Angels), which incorporated on April 4, 1850, only two years after the Mexican-American War and five months prior to California achieving statehood. Settlement of the Los Angeles region continued in the early American Period. The County of Los Angeles was established on February 18, 1850, one of 27 counties established in the months prior to California acquiring official statehood in the United States. Many of the ranchos in the area now known as Los Angeles County remained intact after the United States took possession of California; however, a severe drought in the 1860s resulted in many of the ranchos being sold or otherwise acquired by Americans. Most of these ranchos were subdivided into agricultural parcels or towns (Dumke 1944). Nonetheless, ranching retained its importance, and by the late 1860s, Los Angeles was one of the top dairy production centers in the country (Rolle 2003). By 1876, Los Angeles County reportedly had a population of 30,000 persons (Dumke 1944).

Los Angeles maintained its role as a regional business center, and the development of citriculture in the late 1800s and early 1900s further strengthened this status (Caughey and Caughey 1977). These factors, combined with the expansion of port facilities and railroads throughout the region, contributed to the impact of the real estate boom of the 1880s on Los Angeles (Caughey and Caughey 1977; Dumke 1944).

By the late 1800s, government leaders recognized the need for water to sustain the growing population in the Los Angeles area. Irish immigrant William Mulholland personified the city's efforts for a stable water supply (Dumke 1944; Nadeau 1997). By 1913, the City of Los Angeles purchased large tracts of land in the Owens Valley and Mulholland planned and directed the construction of the 240-mile aqueduct that brought the valley's water to the city (Nadeau 1997). A portion of the aqueduct runs north-south approximately one mile west of the project area.

Los Angeles continued to grow in the twentieth century, in part due to the discovery of oil in the area and its strategic location as a wartime port. The county's mild climate and successful economy continued to draw new residents in the late 1900s, with much of the county transformed from ranches and farms into residential subdivisions surrounding commercial and industrial centers. Hollywood's development into the entertainment capital of the world and southern California's booming aerospace industry were key factors in the county's growth in the twentieth century.

Community of Castaic

The town of Castaic is located in a northwestern portion of the Santa Clarita Valley. According to local historians, the town derives its name from the Tataviam word "kashtuk," which translates to "eyes." Most of the Santa Clarita Valley's history was recorded and shared by the late Jerry Reynolds, former author for the Santa Clarita Valley's daily newspaper, *The Signal* (CATC 2010).

The Cordova family is thought to be the oldest of the white settlers in the Castaic area, arriving around 1835 and working on cattle ranches. In 1853 George Washington Lechler purchased a homestead in nearby Hasley Canyon and built a small adobe as the headquarters for his ranch in 1879. He would become one of the area's best-known citizens. In 1887, the Southern Pacific Railroad constructed a railroad spur line running from Saugus to Ventura and established a railroad depot at Castaic Junction which was barely larger than a phone booth. This rail line was used for both cattle transport and local rail travel. In 1894, a post office was also established at Castaic Junction but closed in less than a year due to a lack of use (CATC 2010). The post office was re-established in 1917 when a proprietor named Sam Parsons purchased one acre of land and opened "Sam's Place," a general store that catered to the needs of

local workers, and eventually became a well-known trucker stop (Reynolds 1998). A school district was eventually established in 1889, and Castaic School opened that same year. The original building was still in use until 1996, when it was demolished (CATC 2010).

Most local historians consider the official birth of Castaic to be around July of 1915 when the California Highway Commission finished work on the old Ridge Route, a road that ran along the La Liebre Mountains from Castaic Canyon to Gorman. In its day, the old Ridge Route was considered to be a significant achievement in engineering. This new road was much more efficient than the old road that ran between Los Angeles and Bakersfield, in that it was 60 miles shorter. The route was intense and winding, containing 642 curves. While the route did cut down on travel time, it never succeeded in bringing permanent residents to Castaic. It was primarily used as a route to the markets in Los Angeles. In October of 1933, the curvy road was replaced by U.S. Route 99, which was replaced again by Interstate 5 in the mid-1960s (CATC 2010).

Industry arrived in Castaic around 1923, when the land was subdivided into five- and ten-acre parcels. With it came Castaic Clay Manufacturing Company (also know as Castaic Brick) in 1927, and George Dunn's Wayside Dairy in 1929, which was eventually leased to the County of Los Angeles in 1937 to be used as a work farm. As Castaic continued to grow over the years, citizens became more concerned with preserving the community's rural/natural environment. The concept of "managed growth" was implemented as a way of maintaining the community's rural and natural beauty for its residents by establishing guidelines for community development. In 2004, the County Board of Supervisors approved a CSD for the community (CATC 2010).

Castaic is divided into five geographic regions: 1) Live Oak, North Bluffs, Hilcrest Park, Hasley Hills, and the Valencia Commerce Center; 2) Val Verde Area; 3) Hasley, Sloan and Romero Canyons; 4) Meadowood, Bravo, Encore, Castaic east of Interstate 5 and south of Lake Hughes Road; and 5) Double C Ranch, Hidden Lake, Stonegate, Northlake, Castaic east of Interstate 5 and north of Lake Hughes Road. The project area falls within Region 4.

Talks are currently under way regarding the future of communities west of Interstate 5, including Stevenson Ranch, Westridge, Castaic, and Tesoro. Currently, these areas are governed by the County of Los Angeles as unincorporated communities. The communities could decide either to combine to form one city, annex into the City of Santa Clarita, or remain as unincorporated communities (Dell 2009).

The Elizabeth Lake-Pitchgen 66 kV transmission line runs north to south through near the center of the project area. The Pardee-Pastoria 220 kV transmission line runs north to south along the eastern edge of the parcel (Paul Shattuck, Southern California Edison, personal communication, 2010). These transmission lines were constructed sometime between 1903 and 1941, based on review of the historic USGS Santa Susana Topographic Quadrangles.

The Castaic Sports Complex is located on 51 acres and was designed to meet the specific needs of the community as expressed in a series of open planning meetings. Opened to the public in 1993, the park contains ball diamonds and picnic areas, a gymnasium and community rooms, a 12-station par/jogging course, and children's play areas (LADPW 2010). The property was previously vacant or used for agricultural lands based on review of historic aerials dating from 1952 to 1969. The adjacent North Agency Headquarters was constructed sometime between 1969 and 1974, based on historic aerials (HistoricAerials.com).

BACKGROUND RESEARCH

LITERATURE SEARCH

On February 23, 2010, SWCA Cultural Resources Project Manager Caprice D. (Kip) Harper conducted a search of the CHRIS at the SCCIC, located at California State University, Fullerton. The search included any previously recorded cultural resources (both archaeological and built environment) and investigations within a one-mile radius of the project area. The CHRIS search also included a review of the NRHP, the CRHR, the California Points of Historical Interest (CPHI) list, the California Historical Landmarks (CHL) list, the Archaeological Determinations of Eligibility (ADOE) list, the California State Historic Resources Inventory (HRI) list, and the City of Los Angeles Historic–Cultural Monuments list. SWCA also reviewed pertinent portions of historic USGS Santa Susana 15-minute quadrangle (1903, 1941) and Tejon (1903) 30-minute quadrangle maps.

Previous Cultural Resources Studies within One Mile of the Project Area

Twenty-eight cultural resources studies have been previously conducted within one mile of the project area (Table 1). None of these studies were conducted within the project area. The closest study, LA 1233, is approximately 500 feet northwest of the project area. Several other studies, LA 1418, LA 4008, and LA 9018, are within 750 feet of the project area on the west side of Interstate 5. All of these studies were negative for cultural resources. A complete bibliography is provided in Appendix A.

Table 1. Previously Conducted Cultural Resources Studies within One Mile of the Project Area

SCCIC Report Number	Study	Author	Year	Proximity to Project Area
LA 88	Archaeological Survey of the Proposed Castaic Development Site	Carrico, R.	1973	Outside
LA 848	Review of Archaeological Resource Identification and Impact Mitigation California Aqueduct Project (West Branch, Mojave Division and Coastal Branch)	Schulz, P.	1977	Outside
LA 1233	Cultural Resource Survey Storm Drain - Castaic Park P.d. No. 1707	Tartaglia, L.	1983	Outside
LA 1418	Cultural Resources Survey for Tentative Tract No. 34365	Romani, G.	1983	Outside
LA 1660	Phase I Feasibility Analysis for the Los Angeles County Airport Site Selection Study: Evaluation of Prehistoric, Historic, and Paleontological Resource Sensitivity of Three Alternate Locations	Whitney-Desautels, N.	1987	Outside
LA 1667	Archaeological Survey of Proposed New Development Areas in Castaic Lake State Recreation Area	Woodward, J.	1987	Outside
LA 1995	Assessment of the Archaeological Impact by the Proposed Zone Change for Portion NW¼ of SW¼ of Sec. 25, T5n. R.17w, Sb	McIntyre, M.	1976	Outside
LA 2209	Archaeological Survey Report of a Two Acre Plot 31455 the Old Road Castic, California	Frieman, J.	1990	Outside
LA 2639	Phase 1 Archaeological Survey and Cultural Resources Assessment of a 5.5 Gross Acres Parcel, Castaic, Los Angeles County, California	W&S Consultants	1992	Outside

Table 1. Previously Conducted Cultural Resources Studies within One Mile of the Project Area

SCCIC Report Number	Study	Author	Year	Proximity to Project Area
LA 2754	Phase 1 Archaeological Survey and Cultural Resources Assessment of a 5.5 Gross Acres Parcel, Castaic, Los Angeles County, California	W&S Consultants	1992	Outside
LA 2891	A Cultural Resources Investigation of Tentative Tract No. 47646: Eighty Acres Located Near Castaic Reservoir, Los Angeles County, California	Robinson, R.	1993	Outside
LA 2934	Archaeological Survey and Impact Assessment of Tentative Parcel Map 20033, a 177 Acre Parcel Near Castaic Creek, Los Angeles County, California	Dillon, B.	1993	Outside
LA 2987	Bicep Transmission Project Magunden to Vincent/pardee Alternative Corridor Study Archaeology, Ethnology, History and Paleontology Technical Reports (draft)	Woods, C.; A. York, R. Apple, T. Gonzalez, S. Van Wormer, T. Temere, and J. Clenand	1987	Outside
LA 3289	Mobil M-70 Pipeline Replacement Project Cultural Resource Survey Report for Mobil Corporation	Davis, G.	1990	Outside
LA 3932	Archaeological Assessment for Pacific Bell Mobile Services Telecommunications Facility La 311-01, 26730 West Tapia Canyon Road, Castaic, County of Los Angeles, California	McLean, D.	1998	Outside
LA 4008	Cultural Resources Investigation Pacific Pipeline Emidio Route	Unknown	1996	Outside
LA 4516	A Phase I Cultural Resources Study for the Heights at Hidden Lakes Project, Tract 52535, Los Angeles County, California	Wlodarski, R.	1999	Outside
LA 5524	Negative Archaeological Survey Report of the Proposed Cold Plane and Overlay Ac Pavement for on and off-ramps on Route 5 from Parker Rd. to Lake Hughes Rd. in the Castaic Areas of Northern Los Angeles County	Sylvia, B.	2000	Outside
LA 6658	Archaeological Survey Report of 4.078 Acres for the Castaic Senior Apartments APN 2865-036-034, Castaic Road, Castaic, Los Angeles County, California	Maki, M.	2002	Outside
LA 7861	Archaeological Survey Report for the Southern California Edison Company Replacement of 30 Deteriorated Poles Private and Public Inholdings, Ventura, Los Angeles, and Santa Barbara Counties, California	Jordan, S., and J. Patterson	2006	Outside
LA 8255	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project State of California: Volume I and II	Arrington, C., and N. Sikes	2006	Outside
LA 8317	A Phase 1 Archaeological Study for Vesting Tentative Tract No. 067617 (the Highlands Project) on Park Vista Drive, North of Knoll Court Located in Castaic, County of Los Angeles, California	Wlodarski, R.	2007	Outside

Table 1. Previously Conducted Cultural Resources Studies within One Mile of the Project Area

SCCIC Report Number	Study	Author	Year	Proximity to Project Area
LA 9015	Records Search and Field Reconnaissance Results for Sprint Site La33xc431c (Castaic Lagoon-CA-7701a) (atc Project No. 85.75013.1022 Task 1) Located at 26730 West Tapia Canyon Road, Castaic, Los Angeles County, California 91384	Wlodarski, R.	2005	Outside
LA 9018	A Phase 1 Archaeological study for Tentative Tract Map Number 53933 a 47+/- Acre Parcel of Land Located in Castaic, County of Los Angeles, California	Wlodarski, R.	2005	Outside
LA 9025	Cultural Resources Reconnaissance for Two 80-acre Parcels and Evaluation of Historic Structures Within the Tapia Ranch Development, Castaic, Los Angeles County, California	O'Neil, S., J. Steely, and P. Maxon	2007	Outside
LA 9026	Cultural Resources Reconnaissance for the Bridge Alternatives at Tapia Canyon Road Project, Castaic, Los Angeles County, California	O'Neil, S.	2006	Outside
LA 10111	A Phase I Cultural Resources Investigation of the Taft Corporation Property 9APN 2865-022-005) in the Castaic Area of Northern Los Angeles County, California	McKenna, J.	2003	Outside
LA 10198	Expansion of Earl Schmidt Filtration Plant	Foster, K.	2002	Outside

Previously Recorded Cultural Resources within One Mile of the Project Area

No cultural resources have been previously recorded within one mile of the project area or within the project area. No listed properties in the NRHP, CRHR, CPHI, CHL, ADOE, or HRI are within the boundaries of the project area.

Historic Maps

SWCA examined the project area on several historic quadrangle maps at the SCCIC. The 1903 USGS Santa Susana quadrangle map shows that the project area is mostly undeveloped, showing a single paved road in close proximity to the project area, with the closest building located one-quarter mile to the east. The 1941 USGS Santa Susana quadrangle map shows more development along U.S. Route 99, including additional buildings to the north and utility lines to the east.

SACRED LANDS FILE SEARCH AND INITIAL NATIVE AMERICAN COORDINATION

SWCA initiated Native American coordination for this project on February 23, 2010. As part of the process of identifying cultural resources within or near the project area, SWCA contacted the NAHC to request a review of the SLF. The NAHC faxed a response on March 8, 2010 (Appendix B), and stated that the SLF search “did not indicate the presence of Native American cultural resources within one-half mile radius of the proposed project site.” The NAHC also provided a contact list of nine Native American individuals or tribal organizations who may have knowledge of cultural resources in or near the project area. SWCA prepared and mailed letters to each of the NAHC-listed contacts on March 11, 2010, requesting information related any Native American cultural resources within or immediately adjacent to the project area. On April 24, 2010, William Gonzalez of the Fernadeño Tataviam Band of Mission Indians sent a reply via U.S. Mail. Mr. Gonzalez stated the following.

After careful review of the information that you have provided, the Tribe has concluded that there is concern that cultural resources might be impacted given the level of soil disturbance. The area of the proposed project site is considered sensitive of Native American Cultural Resources. Numerous archaeological sites have been documented in the area which has been used for habitation, hunting, occupational sites, and religious worship. Due to this history, the Tribe believes that there is a high possibility that cultural resources may be disturbed during project construction. The Tribe proposes to provide tribal consultation and tribal monitoring during project operation.

To date, SWCA has not responded to Mr. Gonzalez’s comments or received any additional responses to the letters that were sent to the NAHC-listed contacts. No additional follow-up contact has been made.

METHODS

ARCHAEOLOGICAL SURVEY

SWCA Cultural Resources Specialist John Covert conducted an intensive-level cultural resources survey for both archaeological and built environment resources on March 11, 2010. The intensive survey included the entire 3.5-acre project site located at 31230 Castaic Road, which is part of the larger 51-acre Castaic Sports Complex (APN 2865-012-916). The interior of the project area is graded flat, and the surrounding area consists of commercial and industrial buildings.

Intensive-level survey methods consisted of a pedestrian survey in parallel transects spaced 10 meters apart over the entire parcel. Within each transect, the archaeologist examined the ground surface for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, ceramics, fire-affected rock [FAR]), soil discoloration that might indicate the presence of a cultural midden, soil depressions, and features indicative of the current or former presence of structures or buildings (e.g., standing exterior walls, postholes, foundations) or historic debris (e.g., metal, glass, ceramics). Ground disturbances such as burrows, cut banks, and drainages were visually inspected.

Photographs were taken of the survey area using a Nikon Coolpix L20 digital camera, with 10 megapixels and 3.6 optical zoom. All field notes, photographs, and records related to the current study are on file at the SWCA Pasadena, California, office.

RESULTS AND IMPACT CONSIDERATIONS

CULTURAL RESOURCES SURVEY

Archaeological Resources

No archaeological resources were observed during the intensive-level survey of the project area. The project area has been quite disturbed by grading, regular lawn mowing, and some landscaping (Photographs 1-4). Visibility was poor, at about 10 percent, throughout most of the project area. This was primarily due to low-lying ground cover (nonnative grasses) throughout most of the project area. Visibility was best (approximately 90 percent) in areas along the dirt access roads in the northern portion of the project area, and around the stockpile/storage area to the southwest (Photographs 4-7). Some modern trash was observed, including glass and plastic shards.

The parcel was used as agricultural lands ca. 1952 and was vacant until 1993 when the Castaic Sports Complex was finished. No archaeological resources were encountered during the records search or the field survey. Portions of the project area were likely graded during construction of the park, and a portion of the project area has been disturbed by trenching activities related to underground utility lines. The results of the study indicate that the proposed project area has a low sensitivity for encountering belowground archaeological resources.

Built Environment Resources

Built environment resources observed within the proposed project area include four wooden utility poles (Elizabeth Lake-Pitchgen 66kV transmission line); a single metal transmission line tower surrounded by low chain-link fencing (Pardee Pastoria 220 kV transmission line); perimeter chain-link/barbed wire fencing; temporary metal storage containers; and temporary concrete barricades. Utility lines run through the center of the site in a north-south direction between two wooden utility poles located to the north, and one pole to the south, with a metal lattice transmission tower in the center (Photograph 6). These transmission lines are positioned on standard towers and have been subjected to routine maintenance over the years.

The results of the records search, map review, and built environment survey did not identify any significant aboveground cultural resources. No resources qualifying as “historical resources” were identified in the project area. Therefore, the proposed project will not have a significant effect on any resources eligible or listed in the CRHR or NRHP.



Photograph 1. Overview of project area from Castaic Road, view to the east.



Photograph 2. Overview of project area, view to the southwest.



Photograph 3. Overview of project area, view to the south.



Photograph 4. Overview of dirt roads in the northern portion of the project area, view to the east.



Photograph 5. Dirt road bisecting the northern portion of the project area, view to the south.



Photograph 6. Fenced area containing high voltage power line tower, view to the west.



Photograph 7. Stockpile and storage area, view to the south.

RECOMMENDATIONS

No “historical resources” as defined in CEQA were identified within the proposed project area or within one mile of it as a result of the literature review and field survey. The results of the soil compaction testing and geotechnical evaluation indicate that fill soils are in the vicinity of the abandoned gas line alignment and in the area of the proposed parking lot, just east of Castaic Road, and alluvial deposits make up the remainder of the project area. Therefore, there is a low potential for encountering undisturbed subsurface archaeological materials in the project area. No additional cultural resources mitigation measures should be necessary beyond the standard archaeological mitigation measures to minimize impacts to unanticipated discovery of belowground cultural resources or the unanticipated discovery of human remains. These mitigation measures are described below.

UNANTICIPATED DISCOVERY OF CULTURAL RESOURCES

In the event that cultural resources are exposed during construction, work in the immediate vicinity of the find must stop until a qualified archaeologist can evaluate the significance of the find. Construction activities may continue in other areas. If the discovery proves significant under CEQA, additional work such as testing or data recovery may be warranted.

UNANTICIPATED DISCOVERY OF HUMAN REMAINS

The discovery of human remains is always a possibility during ground disturbances; State of California Health and Safety Code Section 7050.5 covers these findings. This code section states that no further disturbance shall occur until the Los Angeles County Coroner has made a determination of origin and

disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the human remains are determined to be prehistoric, the Coroner will notify the NAHC, which will determine and notify an MLD. The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

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**APPENDIX A:
South Central Coastal Information Center Bibliography**

SCCIC Bibliography: Proj #16311 Castaic Sports Complex

LA-00088

Author(s): Carrico, Richard L.
Year: 1973
Title: Archaeological Survey of the Proposed Castaic Development Site
Affiliation:
Resources:
Quads: NEWHALL, VAL VERDE
Pages:
Notes:

LA-00848

Author(s): Schulz, Peter D.
Year: 1977
Title: Review of Archaeological Resource Identification and Impact Mitigation California Aqueduct Project (west Branch, Mojave Division and Coastal Branch)
Affiliation: California Department of Parks and Recreation
Resources: 19-000298, 19-000324, 19-000392, 19-000393, 19-000394, 19-000395, 19-000396, 19-000437, 19-000438, 19-000439, 19-000442, 19-000443, 19-000444
Quads: LIEBRE MTN, WHITAKER PEAK
Pages:
Notes:

LA-01233

Author(s): Tartaglia, Louis J.
Year: 1983
Title: Cultural Resource Survey Storm Drain- Castaic Park P.d. No. 1707
Affiliation:
Resources:
Quads: WARM SPRINGS MOUNTAIN, WHITAKER PEAK
Pages:
Notes:

LA-01418

Author(s): Romani, Gwendolyn R.
Year: 1983
Title: Cultural Resources Survey for Tentative Tract No. 34365
Affiliation: Northridge Archaeological Research Center, CSUN
Resources:
Quads: NEWHALL
Pages:
Notes:

LA-01660

Author(s): Whitney-Desautels, Nancy A.
Year: 1987
Title: Phase I Feasibility Analysis for the Los Angeles County Airport Site Selection Study: Evaluation of Prehistoric, Historic, and Paleontological Resource Sensitivity of Three Alternate Locations
Affiliation: Scientific Resource Surveys, Inc.
Resources:
Quads: NEWHALL, VAL VERDE
Pages:
Notes:

SCCIC Bibliography: Proj #16311 Castaic Sports Complex

LA-01667

Author(s): Woodward, Jim
Year: 1987
Title: Archaeological Survey of Proposed New Development Areas in Castaic Lake State Recreation Area
Affiliation: California Department of Parks and Recreation
Resources:
Quads: NEWHALL, WARM SPRINGS MOUNTAIN
Pages:
Notes:

LA-01995

Author(s): McIntyre, Michael J.
Year: 1976
Title: Assessment of the Archaeological Impact by the Proposed Zone Change for Portion Nw 1/4 of Sw 1/4 of Sec. 25, T5n. R.17w, Sb
Affiliation: Northridge Archaeological Research Center, CSUN
Resources:
Quads: NEWHALL
Pages:
Notes:

LA-02209

Author(s): Frierman, Jay D.
Year: 1990
Title: Archaeological Survey Report of a Teo Acre Plot 31455 the Old Road Castaic, California
Affiliation: Jay D. Frierman, Consulting Archaeologist
Resources:
Quads: NEWHALL
Pages:
Notes:

LA-02639

Author(s): W & S Consultants
Year: 1992
Title: Phase 1 Archaeological Survey and Cultural Resources Assessment of a 5.5 Gross Acres Parcel, Castaic, Los Angeles County, California
Affiliation: W & S Consultants
Resources:
Quads: VAL VERDE
Pages:
Notes:

LA-02754

Author(s): Anonymous
Year: 1992
Title: Phase I Archaeological Survey and Cultural Resources Assessment of a 5.5 Gross Acres Parcel, Castaic, Los Angeles County, California
Affiliation: W & S Consultants
Resources:
Quads: VAL VERDE
Pages:
Notes:

SCCIC Bibliography: Proj #16311 Castaic Sports Complex

LA-02891

Author(s): Robinson, R. W.
Year: 1993
Title: A Cultural Resources Investigation of Tentative Tract No.47646: Eighty Acres Located Near Castaic Reservoir, Los Angeles County, California
Affiliation: Consulting Archaeologist
Resources:
Quads: NEWHALL, VAL VERDE
Pages:
Notes:

LA-02934

Author(s): Dillon, Brian D.
Year: 1993
Title: Archaeological Survey and Impact Assessment of Tentative Parcel Map 20033, a 177 Acre Parcel Near Castaic Creek, Los Angeles County, California
Affiliation: Consulting Archaeologist
Resources:
Quads: NEWHALL
Pages:
Notes:

LA-02987

Author(s): Woods, Clyde M., Andrew York, Rebecca Apple, Tirzo Gonzalez, Stephen Van Wormer, Tom Demere, and James H. Cleland
Year: 1987
Title: Bicep Transmission Project Magunden to Vincent/pardee Alternative Corridor Study Archaeology, Ethnology, History and Paleontology Technical Reports (draft)
Affiliation: Dames & Moore
Resources: 19-000405, 19-000676, 19-000806, 19-000947, 19-000951, 19-000952, 19-000954, 19-000955
Quads: BLACK MTN, DEL SUR, FRAZIER MOUNTAIN, GREEN VALLEY, LA LIEBRE RANCH, LEBEC, LIEBRE MTN, LITTLE BUTTES, NEWHALL, RITTER RIDGE, WARM SPRINGS MOUNTAIN, WHITAKER PEAK
Pages:
Notes: Same as VN1285

LA-03289

Author(s): Davis, Gene
Year: 1990
Title: Mobil M-70 Pipeline Replacement Project Cultural Resource Survey Report for Mobil Corporation
Affiliation: Dames & Moore
Resources: 19-000034, 19-000059, 19-000060, 19-000067, 19-000077, 19-000095, 19-000169, 19-000194, 19-000213, 19-000216, 19-000248, 19-000408, 19-000409, 19-000410, 19-000411, 19-000412, 19-000441, 19-000444, 19-000475, 19-000490, 19-000491, 19-000492, 19-000493, 19-000634, 19-000643, 19-000644, 19-000645, 19-000646, 19-000823, 19-000903, 19-000925, 19-000926, 19-000927, 19-000938, 19-000960, 19-000962, 19-000990, 19-000991, 19-000992, 19-001015, 19-001305, 19-001834, 19-001835
Quads: ALAMO MOUNTAIN, BEVERLY HILLS, BLACK MTN, CANOGA PARK, COBBLESTONE MTN, FRAZIER MOUNTAIN, INGLEWOOD, LEBEC, LIEBRE MTN, NEWHALL, OAT MOUNTAIN, SAN FERNANDO, TORRANCE, VAL VERDE, VAN NUYS, VENICE, WARM SPRINGS MOUNTAIN, WHITAKER PEAK
Pages:
Notes: Indexed. This report covers more area than the mapped survey areas.

SCCIC Bibliography: Proj #16311 Castaic Sports Complex

LA-03932

Author(s): McLean, Deborah K.
Year: 1998
Title: Archaeological Assessment for Pacific Bell Mobile Services Telecommunications Facility La 311-01, 26730 West Tapia Canyon Road, Castaic, County of Los Angeles, California
Affiliation: LSA Associates, Inc.
Resources:
Quads: NEWHALL
Pages:
Notes:

LA-04008

Author(s): Unknown
Year: 1996
Title: Cultural Resources Investigation Pacific Pipeline Emdio Route
Affiliation: Science Applications Internatinal Corporation
Resources:
Quads: ACTON, AGUA DULCE, BLACK MTN, FRAZIER MOUNTAIN, LANCASTER EAST, LANCASTER WEST, LEBEC, MINT CANYON, NEWHALL, OAT MOUNTAIN, PACIFICO MOUNTAIN, PALMDALE, RITTER RIDGE, ROSAMOND LAKE, SLEEPY VALLEY, VAL VERDE, WARM SPRINGS MOUNTAIN, WHITAKER PEAK
Pages:
Notes:

LA-04516

Author(s): Wlodarski, Robert J.
Year: 1999
Title: A Phase I Cultural Resources Study for the Heights at Hidden Lakes Project, Tract 52535, Los Angeles County, California
Affiliation: Historical, Environmental, Archaeological, Research, Team
Resources:
Quads: VAL VERDE, WHITAKER PEAK
Pages:
Notes:

LA-05527

~~*Author(s):* Wlodarski, Robert J.
Year: 2000
Title: A Phase I Archaeological Study for the Proposed Magic Mountain/via Princessa Roadway Extension and Interchange City of Santa Clarita, County of Los Angeles, California
Affiliation: Historical, Environmental, Archaeological, Research, Team
Resources:
Quads: NEWHALL
Pages:
Notes:~~

See 5524

South Central Coastal Information Center Detail Record: LA-05524

Citation Information

Authors: Sylvia, Barbara

Year: 2000

Title: Negative Archaeological Survey Report: of the Proposed Cold Plane and Overlay Ac Pavement for on and Off-ramps on Route 5 From Parker Rd. to Lake Hughes Rd. in the Castaic Area of Northern Los Angeles County

Affiliation: Caltrans District 7

Lead Agency: Department of Transportation

Report Type(s): Archaeological survey

No. Pages:

Collections:

Disclosure:

Associated Resources

Notes

Location Info

USGS 7.5' Quads: NEWHALL

Address:

Database Record Metadata

	<i>Date</i>	<i>User</i>	
<i>Entered:</i>	5/5/2008	jay	
<i>Last Modified:</i>			
<i>IC Actions:</i>	<i>Date</i>	<i>User</i>	<i>Action take</i>
	5/6/2008	jay	Appended records from old Surveys database.

SCCIC Bibliography: Proj #16311 Castaic Sports Complex

LA-06658

Author(s): Maki, Mary K.
Year: 2002
Title: Archaeological Survey Report of 4.078 Acres for the Castaic Senior Apartments Project APN 2865-036-034, Castaic Road, Castaic, Los Angeles County, Ca
Affiliation: Conejo Archaeological Consultants
Resources:
Quads: WARM SPRINGS MOUNTAIN
Pages:
Notes:

LA-07861

Author(s): Jordan, Stacey C. and Patterson, Joshua D.
Year: 2006
Title: Archaeological Survey Report for the Southern California Edison Company Replacement of 30 Deteriorated Poles Private and Public Inholdings, Ventura, Los Angeles, and Santa Barbara Counties, California
Affiliation: Mooney, Jones & Stokes
Resources: 19-000729, 19-000730, 19-000731, 19-001266, 56-000141, 56-000550, 56-000562, 56-000901, 56-000902, 56-000980, 56-001110, 56-001124, 56-001125
Quads: CALABASAS, FILLMORE, MALIBU BEACH, MOORPARK, NEWHALL, OJAI, PITAS POINT, POINT DUME, SAN FERNANDO, SANTA PAULA, SANTA PAULA PEAK, SANTA SUSANA, SIMI, THOUSAND OAKS, TRIUNFO PASS, VAL VERDE, VENTURA, YORBA LINDA
Pages:
Notes:

LA-08255

Author(s): Arrington, Cindy and Nancy Sikes
Year: 2006
Title: Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project State of California: Volumes I and II
Affiliation: SWCA Environmental Consultants, Inc.
Resources:
Quads: ANAHEIM, BLACK MTN, BURBANK, CAMARILLO, CANOGA PARK, DANA POINT, EL TORO, FRAZIER MOUNTAIN, HOLLYWOOD, INGLEWOOD, LEBEC, LIEBRE MTN, LONG BEACH, LOS ALAMITOS, LOS ANGELES, MOORPARK, NEWHALL, NEWPORT BEACH, OAT MOUNTAIN, ORANGE, OXNARD, PITAS POINT, SAN CLEMENTE, SAN FERNANDO, SAN JUAN CAPISTRANO, SANTA SUSANA, SATICOY, SIMI, SOUTH GATE, TUSTIN, VAN NUYS, VENICE, VENTURA, WARM SPRINGS MOUNTAIN, WHITAKER PEAK, WHITE LEDGE PEAK, WHITTIER
Pages:
Notes: Same as OR3373, VN2504

LA-08317

Author(s): Wlodarski, Robert J.
Year: 2007
Title: A Phase 1 Archaeological Study for Vesting Tentative Tract No. 067617 (the Highlands Project) on Park Vista Drive, North of Knoll Court Located in Castaic, County of Los Angeles, California
Affiliation: Historical, Environmental, Archaeological, Research, Team
Resources:
Quads: NEWHALL, VAL VERDE
Pages:
Notes:

SCCIC Bibliography: Proj #16311 Castaic Sports Complex

LA-09015

Author(s): Wlodarski, Robert J.

Year: 2005

Title: Records Search and Field Reconnaissance Results for Sprint Site La33xc431c (castaic Lagoon - CA-7701a) (atc Project No. 85.75013.1022 Task 1) Located at 26730 West Tapia Canyon Road, Castaic, Los Angeles County, Ca 91384

Affiliation: Cellular, Archaeological Resource, Evaluations

Resources:

Quads: NEWHALL

Pages:

Notes:

LA-09018

Author(s): Wlodarski, Robert J.

Year: 2005

Title: A Phase 1 Archaeological Study for Tentative Tract Map Number 53933 a 47 +/- Acre Parcel of Land Located in Castaic, County of Los Angeles, California

Affiliation: Historical, Environmental, Archaeological, Research, Team

Resources:

Quads: NEWHALL

Pages:

Notes:

LA-09025

Author(s): O'Neil, Stephen, James Steely, and Patrick Maxon

Year: 2007

Title: Cultural Resources Reconnaissance for Two 80-acre Parcels and Evaluation of Historic Structures Within the Tapia Ranch Development Project, Castaic, Los Angeles County, California

Affiliation: SWCA Environmental Consultants, Inc.

Resources: 19-001447, 19-003038, 19-003046

Quads: NEWHALL

Pages:

Notes:

LA-09026

Author(s): O'Neil, Stephen

Year: 2006

Title: Cultural Resources Reconnaissance for the Bridge Alternatives at Tapia Canyon Road Project, Castaic, Los Angeles County, California

Affiliation: SWCA Environmental Consultants, Inc.

Resources:

Quads: NEWHALL

Pages:

Notes:

SCCIC Bibliography: Proj #16311 Castaic Sports Complex

LA-10111

Author(s): McKenna, Jeanette A.

Year: 2003

Title: A Phase I Cultural Resources Investigation of the Taft Corporation Property (APN 2865-022-005) in the Castaic Area of Northern Los Angeles County, California

Affiliation: McKenna et al.

Resources:

Quads: VAL VERDE

Pages:

Notes:

LA-10198

Author(s): Foster, Karen A.

Year: 2002

Title: Expansion of Earl Schmidt Filtration Plant

Affiliation: Science Applications International Corporation

Resources:

Quads: NEWHALL, WARM SPRINGS MOUNTAIN

Pages: 28

Notes:

SCCIC Bibliography: Unmapped-Proj #16311 Castaic Sports C

LA-00009

Author(s): Foster, John M.
Year: 1973
Title: Assessment of the Archaeological Impact by the Development of Parcels li and Iv, Rinaldi Extension
Affiliation: Northridge Archaeological Research Center, CSUN
Resources:
Quads: OAT MOUNTAIN
Pages:
Notes: Unmappable-no project area map provided

LA-00294

Author(s): Adams, Andrea
Year:
Title: A Preliminary Archaeological Literature Search for the Community Development Plan
Affiliation: University of California, Los Angeles Archaeological Survey
Resources: 19-000036, 19-000136, 19-000158, 19-000167, 19-000182, 19-000300, 19-000342, 19-000385
Quads: BALDWIN PARK, HOLLYWOOD, INGLEWOOD, LANCASTER EAST, LANCASTER WEST, LITTLEROCK, PASADENA, SAN FERNANDO, SOUTH GATE, SUNLAND, VAL VERDE, VAN NUYS, VENICE, WHITTIER
Pages:
Notes: The communities of Lopez, Maravilla Sunshine Acres and Westmont could not be located and may either be on the quads given or others not mentioned.

LA-00700

Author(s): McIntyre, Michael J.
Year: 1979
Title: A Cultural Resource Management Program for the Upper Santa Clara River Valley, Los Angeles and Ventura Counties, California
Affiliation: Department of Anthropology
Resources: 19-000036, 19-000324, 19-000361, 19-000362, 19-000363, 19-000364, 19-000365, 19-000369, 19-000370, 19-000371, 19-000381, 19-000393, 19-000394, 19-000396, 19-000438, 19-000440, 19-000582, 19-000618
Quads: AGUA DULCE, BLACK MTN, VAL VERDE, WARM SPRINGS MOUNTAIN, WHITAKER PEAK
Pages:
Notes:

LA-02429

Author(s): Nordstrom, Hans
Year: 1963
Title: Ucla Archaeological Survey Field Project Number Ucas-001:freeway Re-location Caused by Projected Dam Construction
Affiliation: University of California, Los Angeles Archaeological Survey
Resources: 19-000248
Quads: BLACK MTN, LIEBRE MTN
Pages:
Notes: Unmappable.

SCCIC Bibliography: Unmapped-Proj #16311 Castaic Sports C

LA-02816

Author(s): King, Chester

Year: 1993

Title: Native American Placenames in the Vicinity of the Pacific Pipeline: Part 2: Gaviota to the San Fernando Valley: Draft

Affiliation: Topanga Anthropological Consultants

Resources:

Quads: BURBANK, FILLMORE, HOLLYWOOD, MINT CANYON, NEWHALL, OXNARD, PIRU, PITAS POINT, SAN FERNANDO, SANTA PAULA, SATICOY, SUNLAND, VAL VERDE, VAN NUYS, VENTURA, WHITE LEDGE PEAK

Pages:

Notes: Unmappable. Same as VN2627

LA-03289

Author(s): Davis, Gene

Year: 1990

Title: Mobil M-70 Pipeline Replacement Project Cultural Resource Survey Report for Mobil Corporation

Affiliation: Dames & Moore

Resources: 19-000034, 19-000059, 19-000060, 19-000067, 19-000077, 19-000095, 19-000169, 19-000194, 19-000213, 19-000216, 19-000248, 19-000408, 19-000409, 19-000410, 19-000411, 19-000412, 19-000441, 19-000444, 19-000475, 19-000490, 19-000491, 19-000492, 19-000493, 19-000634, 19-000643, 19-000644, 19-000645, 19-000646, 19-000823, 19-000903, 19-000925, 19-000926, 19-000927, 19-000938, 19-000960, 19-000962, 19-000990, 19-000991, 19-000992, 19-001015, 19-001305, 19-001834, 19-001835

Quads: ALAMO MOUNTAIN, BEVERLY HILLS, BLACK MTN, CANOGA PARK, COBBLESTONE MTN, FRAZIER MOUNTAIN, INGLEWOOD, LEBEC, LIEBRE MTN, NEWHALL, OAT MOUNTAIN, SAN FERNANDO, TORRANCE, VAL VERDE, VAN NUYS, VENICE, WARM SPRINGS MOUNTAIN, WHITAKER PEAK

Pages:

Notes: Indexed. This report covers more area than the mapped survey areas.

LA-03299

Author(s): Craig, Steven

Year: 1967

Title: Ucas-257 Steve Craig's Research Project on Chumash Political and Social Organization

Affiliation: University of California, Los Angeles Archaeological Survey

Resources:

Quads: ALAMO MOUNTAIN, APACHE CANYON, CALABASAS, CAMARILLO, CANOGA PARK, COBBLESTONE MTN, CUDDY VALLEY, CUYAMA PEAK, DEVILS HEART PEAK, FILLMORE, LION CANYON, LOCKWOOD VALLEY, MALIBU BEACH, MATILJA, MOORPARK, NEWBURY PARK, OAT MOUNTAIN, OJAI, OLD MAN MOUNTAIN, OXNARD, PIRU, PITAS POINT, POINT DUME, POINT MUGU, RANCHO NUEVO CREEK, REYES PEAK, SAN FERNANDO, SAN GUILLERMO, SANTA PAULA, SANTA PAULA PEAK, SANTA SUSANA, SATICOY, SAWMILL MTN, SIMI, THOUSAND OAKS, TOPANGA, TOPATOPE MOUNTAINS, TRIUNFO PASS, VAL VERDE, VENTURA, WHEELER SPRINGS, WHITE LEDGE PEAK

Pages:

Notes: Same as VN1443. Included in the unmappables notebook.

SCCIC Bibliography: Unmapped-Proj #16311 Castaic Sports C

LA-03309

Author(s):

Year: 1988

Title: Preliminary Overview: Prehistoric and Historic Resources, Castaic Lake Water Agency Project Area Los Angeles County, California

Affiliation: Scientific Resource Surveys, Inc.

Resources:

Quads: AGUA DULCE, MINT CANYON, NEWHALL, OAT MOUNTAIN, SAN FERNANDO, SANTA SUSANA, VAL VERDE, WARM SPRINGS MOUNTAIN, WHITAKER PEAK

Pages:

Notes: Unmappable Report

LA-03492

Author(s): Davis, Gene

Year: 1990

Title: Templin Highway Supplement to Mobil M-70 Pipeline Replacement Project Cultural Resources Survey Report

Affiliation: Dames & Moore

Resources: 19-000990

Quads: WHITAKER PEAK

Pages:

Notes:

LA-03527

Author(s): Anonymous

Year: 1972

Title: Ucas-104 Malibu Freeway From Golden State Freeway to Pacific Coast Freeway Through Malibu Canyon, Los Angeles and Ventura Counties

Affiliation: UCAS

Resources:

Quads: CALABASAS, MALIBU BEACH, SANTA SUSANA, VAL VERDE, WHITAKER PEAK

Pages:

Notes: Included in the unmappables notebook.

LA-03588

Author(s): Hasteley, Ed

Year: 1992

Title: Proposed South Coast Resource Management Plan and Final Environmental Impact Statement

Affiliation: Bureau of Land Management

Resources:

Quads: ACTON, AGUA DULCE, ALBERHILL, BEVERLY HILLS, BLACK MTN, BLACK STAR CANYON, BURBANK, BURNT PEAK, CALABASAS, CANADA GOBERNADORA, CANOGA PARK, CHILAO FLAT, COBBLESTONE MTN, CONDOR PEAK, CORONA SOUTH, CRYSTAL LAKE, DANA POINT, EL TORO, GREEN VALLEY, HOLLYWOOD, JUNIPER HILLS, LA LIEBRE RANCH, LAGUNA BEACH, LAKE HUGHES, LEBEC, LITTLEROCK, MALIBU BEACH, MESCAL CREEK, MINT CANYON, MOUNT SAN ANTONIO, NEENACH SCHOOL, NEWHALL, NEWPORT BEACH, OAT MOUNTAIN, ORANGE, PACIFICO MOUNTAIN, PALMDALE, POINT DUME, PRADO DAM, RITTER RIDGE, SAN CLEMENTE, SAN FERNANDO, SAN JUAN CAPISTRANO, SAN PEDRO, SANTA SUSANA, SANTIAGO PEAK, SEAL BEACH, SITTON PEAK, SLEEPY VALLEY, SUNLAND, THOUSAND OAKS, TOPANGA, TORRANCE, TRIUNFO PASS, TUSTIN, VAL VERDE, VALYERMO, VAN NUYS, WARM SPRINGS MOUNTAIN, WATERMAN MTN, WHITAKER PEAK

Pages:

Notes: Indexed report. This reports consists of a huge overview of Los Angeles and Orange Counties and involves all Orange County Quads and all except the NE quads of Los Angeles Co. All the Quad no. were entered. See report for full listing of Quad names.

SCCIC Bibliography: Unmapped-Proj #16311 Castaic Sports C

LA-03796

Author(s):
Year: 1989
Title: Technical Report of Cultural Resources Studies for the Proposed Wtg-west, Inc. Los Angeles to San Francisco and Sacramento, California Fiber Optic Cable Project
Affiliation: BioSystems Analysis, Inc.
Resources: 19-000034, 19-000077, 19-000248, 19-000407, 19-000408, 19-000409, 19-000823, 19-001124, 19-001354
Quads: BLACK MTN, FRAZIER MOUNTAIN, LIEBRE MTN, WHITAKER PEAK
Pages:
Notes: report is also listed as unmappable b/c pipeline covers quads that maps were not provided for

LA-04103

Author(s): Unknown
Year: 1995
Title: Draft Cultural Resources Report for the Santa Clara River Enhancement and Management Plan
Affiliation: CH2M Hill
Resources:
Quads: ACTON, AGUA DULCE, FILLMORE, MINT CANYON, MOORPARK, NEWHALL, OXNARD, PIRU, SANTA PAULA, SATICOY, VAL VERDE
Pages:
Notes: Unmappable

LA-05324

Author(s): Duke, Curt
Year: 2000
Title: Cultural Resource Assessment for Pacific Bell Mobile Services Facility La 965-12, County of Los Angeles, California
Affiliation: LSA Associates, Inc.
Resources:
Quads: NEWHALL
Pages:
Notes: Unmappable, was also known as LA6631 until deleted on 1/31/07

LA-05772

Author(s): Cook, Jody
Year: 2002
Title: Recreation Site Restroom Replacement [cfr 800.4(c)(2)]
Affiliation: U.S. Forest Service
Resources:
Quads: WHITAKER PEAK
Pages:
Notes:

SCCIC Bibliography: Unmapped-Proj #16311 Castaic Sports C

LA-07570

Author(s): Noiron, Judy
Year: 2005
Title: Historic Context Statement the Southern California Transmission/distribution Line Systems Within the Angeles National Forest
Affiliation: U.S. Forest Service
Resources:
Quads: AGUA DULCE, AZUSA, BLACK MTN, CHILAO FLAT, GLENDORA, LEBEC, LIEBRE MTN, MOUNT SAN ANTONIO, MT BALDY, MT WILSON, NEWHALL, PASADENA, SAN FERNANDO, VAN NUYS, WHITAKER PEAK
Pages:
Notes:

LA-07590

Author(s): Wlodarski, Robert J.
Year: 2005
Title: A Phase I Archaeological Study for 25411 Malibu Road (APN#4459-014-012) and 25423 Malibu Road (APN#4459-014-013) City of Malibu, County of Los Angeles, California
Affiliation: Historical, Environmental, Archaeological, Research, Team
Resources:
Quads: MALIBU BEACH
Pages:
Notes:

LA-07830

Author(s): Shepard, Richard S.
Year: 2004
Title: Phase I Cultural Resources Assessment: Proposed Castaic High School Project, Pipeline Realignment, and Water Line and Tank, Castaic Area, Los Angeles County, California
Affiliation: BonTerra Consulting
Resources: 19-186861
Quads: WARM SPRINGS MOUNTAIN, WHITAKER PEAK
Pages:
Notes: Unmappable, bad map.

LA-08240

Author(s): Anonymous
Year: 2007
Title: Northlake Specific Plan Vesting Tentative Tract Map No. 51852 Specific Plan Amendment No. 98-047 Conditional Use Permit (site Plan Review) No. 98-047 Conditional Use Permit (off-site Grading) No. Rcup 200400015 Development Agreement Amendment No. 87-172 D
Affiliation: BonTerra Consulting
Resources:
Quads: WARM SPRINGS MOUNTAIN, WHITAKER PEAK
Pages:
Notes:

SCCIC Bibliography: Unmapped-Proj #16311 Castaic Sports C

LA-08242

Author(s): Romani, John F. and Gwendolyn, Romani
Year: 1992
Title: Route 126, I-5 to Sr-14, Santa Clarita, Los Angeles County, California Final Historic Property Survey Report
Sch Number: 90011149 7-1a-126-5.8/12.7 07820-065710
Affiliation: Parsons Brinckerhoff Quade & Douglas, Inc.
Resources: 19-000351, 19-001829, 19-001845
Quads: MINT CANYON, NEWHALL
Pages:
Notes: Unmappable

LA-09777

Author(s): Knight, Albert and Sherri Gust
Year: 2006
Title: Evaluation of Ten Additional Pacific Pipeline Systems Repair Sites in the Angeles National Forest, California,
ARR #05-01-01007
Affiliation: Cogstone Resource Management, Inc.
Resources: 19-000990, 19-000991, 19-000992, 19-001305, 19-001354, 19-001834, 19-002463, 19-002464, 19-003114,
19-003142, 19-100451
Quads: BLACK MTN, LIEBRE MTN, WHITAKER PEAK
Pages: 21
Notes:

APPENDIX B:
Native American Correspondence

STATE OF CALIFORNIA

Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
 SACRAMENTO, CA 95814
 (916) 653-6251
 Fax (916) 657-5390
 Web Site www.nahc.ca.gov
da_nahc@pacbell.net



March 8, 2010

Ms. Caprice "Kip" Harper

SWCA ENVIRONMENTAL CONSULTANTS

620 Fair Oaks Avenue, Suite 190
 South Pasadena, CA 91030

Sent by FAX to 626-240-0607

No. of Pages: 4

Re: Request for a Sacred Lands File Search and Native American Contacts List for a Proposed "Cultural Resources Services for the Castaic Sports Complex Project;" located in the City of Castaic Los Angeles County, California

Dear Ms. Harper:

The Native American Heritage Commission (NAHC), the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources (c.f. CA Public Resources Code §21070; also c.f. *Environmental Protection Information Center v. Johnson (1985) 170 Cal App. 3rd 604*), was able to perform a record search of its Sacred Lands File (SLF) for the affected project area (APE) requested. The California Environmental Quality Act (CEQA; CA Public Resources Code Section 21000 – 21177) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the California Code of Regulations §15064.5(b)(c)(f) CEQA guidelines). Section 15382 of the 2007 CEQA Guidelines defines a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ... objects of historic or aesthetic significance." The NAHC SLF search **did not indicate** the presence of Native American cultural resources within one-half - mile radius of the proposed project site (APE).

This letter includes state and federal statutes relating to Native American historic properties of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law.

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Enclosed are the names of the nearest tribes and interested Native American individuals that the NAHC recommends as 'consulting parties,' for this purpose, that may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We recommend that you contact persons on the attached list of Native American contacts. Furthermore we suggest that you contact the California Historic Resources Information System (CHRIS) at the Office of Historic Preservation Coordinator's office (at (916) 653-7278, for referral to the nearest Information Center of which there are 10.

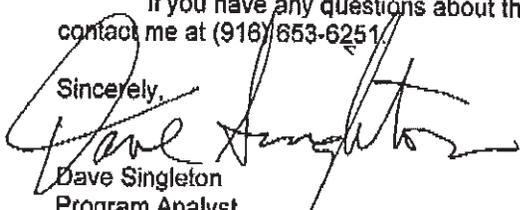
Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA (42 U.S.C. 4321-43351) and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 (f) *et seq.*), 36 CFR Part 800.3 (f) (2), the President's Council on Environmental Quality (CSQ; 42 U.S.C. 4371 *et seq.*) and NAGPRA (25 U.S.C. 3001-3013), as appropriate. . The 1992 *Secretary of the Interior's Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including *cultural landscapes*.

Lead agencies should consider avoidance, as defined in Section 15370 of the California Environmental Quality Act (CEQA) when significant cultural resources could be affected by a project. Also, Public Resources Code Section 5097.98 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery. Discussion of these should be included in your environmental documents, as appropriate.

The response to this search for Native American cultural resources is conducted in the NAHC Sacred Lands Inventory, established by the California Legislature (CA Public Resources Code §5097.94(a) and is exempt from the CA Public Records Act (c.f. California Government Code §6254.10) although Native Americans on the attached contact list may wish to reveal the nature of identified cultural resources/historic properties. Confidentiality of 'historic properties of religious and cultural significance' may also be protected the under Section 304 of the NHPA or at the Secretary of the Interior' discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C, 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APE and possibly threatened by proposed project activity.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,


Dave Singleton
Program Analyst

Attachment: Native American Contacts List (NOTE: we further recommend that other forms of 'proof of mailing or proof of contact be utilized instead of 'Return Receipt Requested' Certified or Registered Mail.) Further, we suggest a follow-up telephone call to the contacts if the replies are not received or need clarification.

Native American Contacts
March 8, 2010
Los Angeles County

Charles Cooke
32835 Santiago Road
Acton, CA 93510

(661) 733-1812 - cell
suscol@intox.net

Chumash
Fernandeno
Tataviam
Kitanemuk

LA City/County Native American Indian Comm
Ron Andrade, Director
3175 West 6th Street, Rm.
Los Angeles, CA 90020
randrade@css.lacounty.gov
(213) 351-5324
(213) 386-3995 FAX

Beverly Salazar Folkes
1931 Shadybrook Drive
Thousand Oaks, CA 91362
805 492-7255
(805) 558-1154 - cell
folkes9@msn.com

Chumash
Tataviam
Fernandeno

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Admin.
Gabrielino Tongva
tattnlaw@gmail.com
310-570-6567

Owl Clan
Dr. Kote & Lin A-Lul'Koy Lotah
48825 Sapaque Road
Bradley, CA 93426
(805) 472-9536

Chumash

Kitanemuk & Yowlumne Tejon Indians
Delia Dominguez
981 N. Virginia
Covina, CA 91722
(626) 339-6785
Yowlumne
Kitanemuk

Fernandeno Tataviam Band of Mission Indians
William Gonzales, Cultural/Environ Depart
601 South Brand Boulevard, Suite 102
San Fernando CA 91340
rortega@tataviam-nsn.us
(818) 837-0794 Office
(818) 581-9293 Cell
(818) 837-0796 Fax

Fernandeno
Tataviam

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838
Newhall, CA 91322
tsen2u@live.com
(661) 753-9833 Office
(760) 885-0955 Cell
(760) 949-1604 Fax
Fernandeno
Tataviam
Serrano
Vanyume
Kitanemuk

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code. Also, federal National Environmental Policy Act (NEPA), National Historic Preservation Act, Section 106 and federal NAGPRA.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed "Cultural Resources Services for the Castaic Sports Complex Project; located in the City of Castaic; Los Angeles County, California for which a Sacred Lands File search and Native American Contacts list were requested.

Native American Contacts
March 8, 2010
Los Angeles County

Randy Guzman - Folkes
655 Los Angeles Avenue, Unit E
Moorpark, CA 93021
ndnRandy@gmail.com
(805) 905-1675 - cell

Chumash
Fernandeño
Tataviam
Shoshone Paiute
Yaqui

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code. Also, federal National Environmental Policy Act (NEPA), National Historic Preservation Act, Section 106 and federal NAGPRA.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed "Cultural Resources Services for the Castaic Sports Complex Project; located in the City of Castaic; Los Angeles County, California for which a Sacred Lands File search and Native American Contacts list were requested.



ENVIRONMENTAL CONSULTANTS
Sound Science. Creative Solutions.

Pasadena Office
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030
Tel 626.240.0587 Fax 626.240.0607
www.swca.com

March 11, 2010

Ron Andrade
LA City/County Native American Indian Commission
3175 West 6th Street, Rm. 403
Los Angeles, CA 90020

Sent Via U.S. Mail

RE: Castaic Sports Complex Pool Project

Dear Mr. Andrade:

SWCA Environmental Consultants has been retained to conduct a cultural resources survey for the Castaic Sports Complex Pool Project in the unincorporated community of Castaic in Los Angeles County, California. As part of the process of identifying cultural resources issues for this project, the Native American Heritage Commission (NAHC) was contacted by SWCA to conduct a Sacred Lands File (SLF) search and to provide a list of Native American individuals and/or tribal organizations that may have knowledge of cultural resources in or near the project area. The SLF search "did not indicate the presence of Native American cultural resources within one-half mile radius of the proposed project site," but did recommend that we consult with you directly regarding your knowledge of the presence of cultural resources that may be impacted by this project.

The project proposes to construct and operate a new swimming pool complex within the northwestern portion of the existing Castaic Sports Complex. The 3.5-acre project area is located at 31230 Castaic Road in the unincorporated community of Castaic in Los Angeles County, California. The project area is situated in Township 5 North, Range 17 West in Section 25 of the Newhall, California 7.5' U.S. Geological Survey Quadrangle (see enclosed project location map).

If you have any knowledge of cultural resources that may exist within or near the project area, please contact me at (626) 240-0587, kharper@swca.com, or at the above address at your earliest convenience. Thank you for your assistance.

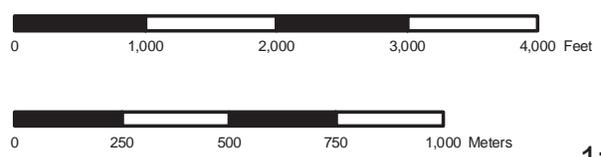
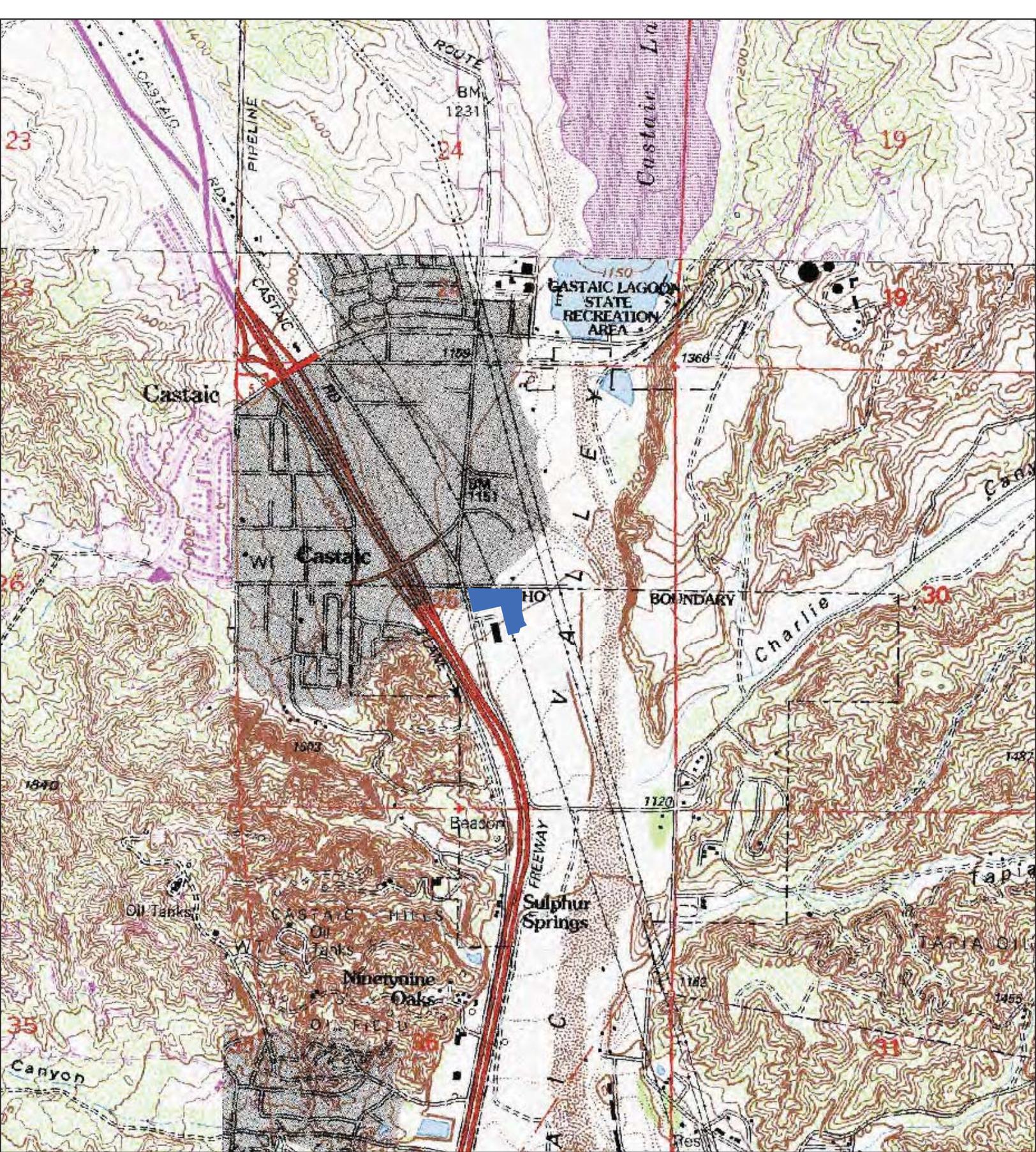
This consultation is project-specific and is not intended to constitute as SB 18 consultation, should that be required for this project.

Sincerely,

A handwritten signature in black ink that reads "Kip Harper".

Caprice D. (Kip) Harper, M.A., RPA
Senior Project Manager – Cultural Resources

Enclosures: Project Location and Parcel Map



Legend

 Project Area

USGS 7.5' Quadrangle:
 Newhall, CA 1995
 Township: 5N, Range: 17W, Section: 25



Larry J. Ortega Sr.
Tribal President



Fernandefio Tataviam Band of Mission Indians
Tribal Historic & Cultural Preservation

April 24, 2010

Caprice D. Harper, Senior Project Manager
SWCA Environmental Consultants
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030

Re: Castaic Sports Complex Pool Project

Dear Ms. Harper:

We appreciate the opportunity to be able to provide comments on the proposed Castaic Sports Complex Pool Project. The Fernandefio Tataviam Band of Mission Indians is a California Native American Indian government in the northern Los Angeles County. The Native American Heritage Commission, the State of California trustee agency for Native American Cultural Resources, designated the Tribe as the local trustee agency within northern Los Angeles County by limits of its tribal historic boundaries. The Tribe fully engages to extent of the respected governing laws to protect and maintain all historic and cultural sites in which it may have interest.

After careful review of the information that you have provided, the Tribe has concluded that there is concern that cultural resources might be impacted given the level of soil disturbance. The area of the proposed project site is considered sensitive of Native American Cultural Resources. Numerous archaeological sites have been documented in the area which has been used for habitation, hunting, occupational sites, and religious worship. Due to this history, the Tribe believes that there is a high possibility that cultural resources may be disturbed during project construction. The Tribe proposes to provide tribal consultation and tribal monitoring during project operation. Should you have any questions you may contact our Director of Public Affairs, Nicole Johnson via email at njohnson@tataviam-nsn.us.

Sincerely,

for
William Gonzalez

THCP Committee Chairman

APPENDIX B
GEOTECHNICAL EVALUATION
CASTAIC POOL COMPLEX

**GEOTECHNICAL EVALUATION
CASTAIC POOL COMPLEX
31230 CASTAIC ROAD
CASTAIC, CALIFORNIA
CONTRACT NO. PW13097
WORK AUTHORIZATION
NO. ANMCP-00028**

PREPARED FOR:
County of Los Angeles
Public Works Department
900 South Fremont Avenue, 5th Floor
Alhambra, California 91803-1331

PREPARED BY:
Ninyo & Moore
Geotechnical and Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618

April 22, 2010
Project No. 207247029

April 22, 2010
Project No. 207247029

Mr. Mohamed Sultan
County of Los Angeles
Public Works Department
900 South Fremont Avenue, 5th Floor
Alhambra, California 91803-1331

Subject: Geotechnical Evaluation
Castaic Pool Complex
31320 Castaic Road
Castaic, California
Contract No. PW13097
Work Authorization No. ANMCP-00028

Dear Mr. Sultan:

In accordance with your request and authorization, we have performed a geotechnical evaluation for the Castaic Pool Complex project located at 31320 Castaic Road in Castaic, California. This report summarizes our findings and conclusions regarding the soil and geologic conditions at the site, and provides geotechnical recommendations for the proposed improvements.

We appreciate the opportunity to be of service on this project.

Respectfully submitted,
NINYO & MOORE



James J. Barton, C.E.G.
Senior Geologist

VAM/JJB/DBC/LTJ/mlc

Distribution: (3) Addressee (3 hard copies, 1 CD)



Daniel Chu, Ph.D., G.E.
Chief Geotechnical Engineer



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1. INTRODUCTION

In accordance with your request, we have performed a geotechnical evaluation for the proposed Castaic Pool Complex project located at 31320 Castaic Road in Castaic, California (Figure 1). As an aid to our study, we were provided a concept package for the project (J.C. Chang & Associates, 2009). The purpose of our study was to evaluate the soil and geologic conditions at the site in order to provide geotechnical design recommendations for the planned improvements. This report presents our findings, conclusions, and recommendations regarding the subject project.

2. SCOPE OF SERVICES

Our scope of services included the following:

- Review of readily available geologic maps, published literature, stereoscopic aerial photographs, and preliminary design concepts for the project.
- Review of seismic data, including fault hazard maps, seismic and flood hazards maps, and other readily available data regarding geologic and seismic hazards within the project area.
- Geotechnical site reconnaissance to observe the general surface conditions and to select and mark the boring locations for underground utility clearance.
- Subsurface exploration consisting of the drilling, logging, and sampling of fifteen small-diameter hollow-stem auger exploratory borings. The borings were logged by a representative of our firm, and bulk, Standard Penetration Test, and relatively undisturbed soil samples were collected at selected intervals for laboratory testing.
- Performance of percolation testing in two borings located in the vicinity of the proposed runoff collection area and shallow infiltration system.
- Laboratory testing of selected soil samples, including evaluation of in-situ moisture content and dry density, gradation, No. 200 wash sieve analysis, consolidation, expansion index, Proctor density, direct shear strength, R-value, and corrosivity.
- Data compilation and geotechnical analysis of field and laboratory data.
- Preparation of this geotechnical report presenting our findings, conclusions, and recommendations for the design and construction of the proposed project.

3. SITE DESCRIPTION

The project area encompasses approximately 2½ acres of the northwest portion of the existing Castaic Regional Sports Complex (Figure 1). The property is situated within the Castaic Valley west of the Castaic Creek and approximately ¾ miles south of the existing Castaic Lagoon (Lake). Topographically, the site slopes gently to the east from an elevation of approximately 1134 feet above mean seal level (MSL) to approximately 1126 feet MSL near the proposed infiltration area. A small slope ascends up approximately 6 feet to Castaic Road along the western edge of the site. Some ponding and wet soils were observed near the surface across the site.

The site is currently undeveloped. A walking trail is present along the north and east sides of the parcel. An approximately 4-foot high earthen berm and chain link fence border the south side of the project. A landscape area with trees and pavements for the existing Los Angeles County North Agency Parks and Recreation facility is present south of the berm. Concrete k-rails border the west side below the adjacent Castaic Road. Numerous north-to-south trending underground oil/gas pipelines cross the site near the western boundary and near the center of the property. In addition, a pre-existing oil pipeline was removed near the center of the property. The resulting excavation of the pre-existing pipeline was backfilled with compacted soil (Southwest Geotechnical, Inc., 2009). North-to-south trending overhead high-voltage transmission lines parallel the eastern boundary of the site. Vegetation across the undeveloped portion of the site generally consists of a low growth of weeds.

Castaic Road is a two lane, arterial, asphalt concrete road that parallels Interstate 5. A portion of the road has been widened to four lanes. The area adjacent to the proposed pool complex includes a gravel shoulder. Several utilities are present under the roadway and shoulder area.

Existing park improvements are located to the east and southeast of the proposed pool complex. Existing improvements include the Parks and Recreation building, three lighted baseball/softball fields, picnic area, basketball courts, play area, restroom facilities, asphalt and open space areas. The open space areas include lawns and medium to large trees. The existing North Agency Parks and Recreation building and restroom facility are single-story structures.

4. PROPOSED CONSTRUCTION

The project will include construction of a Recreational Pool, Shallow Pool, Splash Pad, a Pool Building/Recreation office, and a paved parking lot. A future Olympic Pool is proposed along the southeast side of the property. We understand that this area will be graded as part of the grading for the proposed improvements. Additional improvements will include roadway construction along Castaic Road, concrete decking, walkways, lawn and planter area and on-site storm water infiltration system. Locations of the proposed improvements are presented on Figure 2. Details of the proposed improvements are as following:

- Recreational Swimming Pool: 25 meters by 25 yards pool with a depth of approximately 6 to 10 feet. Construction will include concrete pool deck with a width of approximately 20 feet.
- Shallow Pool: 21 feet by 75 feet pool with depth of approximately 3 to 4 feet. Construction will include concrete pool deck with a width of approximately 20 feet.
- Splash Pad: Approximately 1,000 square feet of 6-inch-thick concrete pads to contain water features. The splash pads will include 18-inch-high concrete seat walls.
- Pool Building/Recreation Office: Single-story structure with a foot print of approximately 7,800 square-feet. The building will include office rooms, men's and women's changing rooms, locker rooms, showers, a classroom and storage rooms. We anticipate the structure will have slab-on-grade floors. The building will also have a future addition built as a shell during this stage.
- Parking Lot: At-grade paved parking lot parallel to North Castaic Road.
- Future Olympic Pool: A future 50 meter by 25 yard pool up to 15 feet deep.
- Infiltration System: A shallow infiltration system for storm water runoff will be located southeast of the pool area approximately 90 feet from the existing power line tower.

5. SUBSURFACE EVALUATION AND LABORATORY TESTING

Our subsurface evaluation was conducted on March 17 and 18, 2010, and included the drilling, logging, and sampling of fifteen small-diameter borings with a truck-mounted drill rig utilizing 8-inch-diameter hollow-stem augers. The borings were drilled to depths of approximately 1½ to 71½ feet and were logged by a representative of our firm. The purpose of the subsurface exploration was to observe the soil conditions and to collect bulk and relatively undisturbed samples at

selected intervals for laboratory testing. Excavated materials were visually classified in the field and samples were transported to our laboratory for testing. Logs of the borings are presented in Appendix A. The approximate locations of the exploratory borings are shown on Figure 2.

Laboratory testing of representative soil samples was performed to evaluate in-situ moisture content and dry density, gradation, percentage of particles finer than No. 200 sieve, consolidation, expansion index, Proctor density, direct shear strength, R-value, and soil corrosivity (i.e., soil pH, electrical resistivity, water-soluble sulfate content, and chloride content). The results of our in-situ moisture content testing are presented on the boring logs in Appendix A. The remaining laboratory testing results are presented in Appendix B.

6. GEOLOGY AND SUBSURFACE CONDITIONS

6.1. Regional Geologic Setting

The project is located near the western edge of Soledad Basin, which is part of the Transverse Ranges geomorphic province of southern California (Norris and Webb, 1990). The Transverse Ranges comprise several roughly east-west trending mountain ranges with intervening valleys. The non-marine Soledad Basin is one of the larger intervening valleys and joins the marine Ventura Basin near the San Gabriel fault to the north. Both the Ventura and Soledad Basins are topographic expressions of a large syncline which extends offshore to include the Santa Barbara Channel. In the Ventura and Soledad Basins, middle and late Cenozoic marine and non-marine sedimentary rocks overlie crystalline basement. Published geologic maps indicate that the site is underlain by Holocene-age alluvial deposits consisting of gravel, sand, and clay (Dibblee, 1996). The non-marine Plio-Pleistocene Saugus Formation forms the majority of the exposures in the hills near the site (Figure 3).

The Transverse Ranges geomorphic province is traversed by several major active faults. The active San Gabriel fault is located southwest of the project and the active San Andreas fault is located to the northeast of the proposed project. Also, the Sierra Madre and San Fernando faults are exposed along the southern slopes of the San Gabriel Mountains and in the San Fernando Valley. Major tectonic activity associated with the northwest-trending faults of the

San Andreas system exhibit right-lateral, strike-slip movement. Faults that front the Transverse Ranges, and those in the interior Transverse Ranges are typically thrust faults.

6.2. Site Geology

The materials encountered in our exploratory borings generally included alluvial deposits with some shallow fill soils. Fill soils were encountered in borings B-11, B-12 and B-13 to the depths explored of approximately 5, 5 and 1¹/₂ feet, respectively. In borings B-14 and B-15, fill was also encountered to a depth of approximately 3 feet. Fill soils were generally comprised of very loose to medium dense, clayey and silty sand. Based on a review of a compaction report by Southwest Geotechnical, an abandoned pipeline near the center of the site was removed to a depth of approximately 7 feet and backfilled with compacted silty sand with some gravel to a reported 95 percent relative compaction (Southwest Geotechnical Inc., 2009). The report states that the fill soils were compacted but not intended for support of structures.

Alluvial deposits were encountered beneath the fill soil and at the other boring locations to the depths explored up to approximately 71¹/₂ feet. In general, the alluvium consisted of interbedded lenses of loose to very dense, clayey and silty sand, poorly graded sand, poorly graded sand with silt, and well graded sand. Layers of firm to very stiff sandy clay were also encountered at the boring locations. Varying amounts of gravel and cobbles were present in the alluvium.

6.3. Groundwater

Groundwater was encountered in borings B-7 and B-9 during drilling operations at a depth of approximately 45 feet. Groundwater level was measured in boring B-9 at approximately 43.3 feet, approximately 19 hours after drilling. The historical high groundwater at the site is mapped at approximately 5 feet below the ground surface (California Division of Mines and Geology [CDMG], 1997). It should be noted that groundwater levels are influenced by seasonal variations in precipitation, irrigation, groundwater pumping, and other factors and are, therefore, subject to variation.

7. PERCOLATION TESTING

Percolation testing was performed on March 18, 2010, at the location of borings B-14 and B-15 to evaluate the infiltration rate of the near-surface soils for the purpose of designing a possible on-site infiltration system for storm water runoff. Subsequent to the drilling of the borings, a 2-inch-diameter polyvinyl chloride (PVC) pipe was placed in the bore hole. The PVC pipe was slotted between the depths of approximately three to five feet below the ground surface. The annulus of the pipe was backfilled with gravel to approximately one foot below the ground surface. The borings were pre-saturated on March 17, 2010, for a 24-hour period. Percolation testing was performed on the following day.

Percolation testing was conducted by placing water in the PVC pipe to establish a head of water and measuring the drop in water at approximately ten minute intervals for approximately one hour. The measured rate of infiltration during the last 10 minutes was used to evaluate the percolation rate. The results of our percolation testing are presented in Table 1. Due to the variation of subsurface soil, the coefficient of permeability varies generally on the order of 10 times or higher. Accordingly, we recommend that the on-site infiltration system for the storm water runoff be designed with a coefficient of permeability ranging from 1×10^{-4} to 10×10^{-4} cm/sec for the soil at a depth of 3 to 5 feet below the existing ground surface.

Table 1 – Percolation Test Results

Location	Estimated Percolation Rate (gal/ft ² /day)	Coefficient of Permeability (cm/sec)
B-14 (3 to 5 feet)	8	4×10^{-4}
B-15 (3 to 5 feet)	5	2×10^{-4}
Notes: gal/ft ² /day – gallons per square foot per day cm/sec – centimeters per second		

8. FLOOD HAZARDS

Based on our review of the County of Los Angeles Department of Regional Planning's Safety Element (1990), the site is located within a dam inundation zone if there is a breach in the Cas-

taic Lake dam located approximately ¾ miles northeast of the site. The site is also located in a 100-year flood hazard zone (County of Los Angeles, 1990).

9. FAULTING AND SEISMICITY

Based on our review of the referenced geologic maps and stereoscopic aerial photographs, the ground surface in the vicinity of the project site is not mapped as being transected by known active or potentially active faults. The site is not located within an Earthquake Fault Zone (State of California, 1991). The site is located in a seismically active area, as is the majority of southern California, and the potential for strong ground motion at the site is considered significant.

Table 1 lists selected principal known active faults that may affect the subject site and the maximum moment magnitudes (M_{max}) as published by Cao, et al. (2003) for the California Geological Survey (CGS). The approximate locations of major faults in the region and their geographic relationships to the site are shown on Figure 4. The approximate fault-to-site distances were calculated using the computer program FRISKSP (Blake, 2001).

Table 2 – Principal Active Faults

Fault	Fault to Site Distance¹ Kilometers (miles)	Maximum Moment Magnitude² (M_{max})
San Gabriel	0.1 (0.02)	7.2
Holser	4.5 (2.8)	6.5
Northridge (East Oak Ridge)	11.4 (7.1)	7.0
Oak Ridge (Onshore)	13.8 (8.6)	7.0
San Andreas – 1857 Rupture	25.8 (16.0)	7.8
Verdugo	28.7 (17.8)	6.9
Sierra Madre	37.6 (23.4)	6.7
Hollywood	43.3 (26.9)	6.4
Santa Monica	47.0 (29.2)	6.6
Notes: ¹ Blake, 2001. ² Cao, et al., 2003.		

The principal seismic hazards evaluated at the subject site are surface ground rupture, ground shaking, and seismically induced liquefaction. A brief description of these hazards and the potential for their occurrences on site are discussed below.

9.1. Ground Rupture

Based on our review of the referenced literature and our site reconnaissance, no active faults are known to cross the project site. Therefore, the probability of damage from surface ground rupture is considered to be low. However, lurching or cracking of the ground surface as a result of nearby seismic events is possible.

9.2. Ground Motion

The 2007 California Building Code (CBC) recommends that the design of structures be based on the peak horizontal ground acceleration (PGA) having a 2 percent probability of exceedance in 50 years, which is defined as the Maximum Considered Earthquake (MCE). The statistical return period for PGA_{MCE} is approximately 2,475 years. The probabilistic PGA_{MCE} for the site was calculated as 0.83g using the United States Geological Survey (USGS, 2009) ground motion calculator (web-based). The design PGA was estimated to be 0.55g using the USGS ground motion calculator. These estimates of ground motion do not include near-source factors that may be applicable to the design of structures on site.

9.3. Liquefaction

Liquefaction is the phenomenon in which loosely deposited granular soils with silt and clay contents of less than approximately 35 percent and non-plastic silts located below the water table undergo rapid loss of shear strength when subjected to strong earthquake-induced ground shaking. Ground shaking of sufficient duration results in the loss of grain-to-grain contact due to a rapid rise in pore water pressure, and causes the soil to behave as a fluid for a short period of time. Liquefaction is known generally to occur in saturated or near-saturated cohesionless soils at depths shallower than 50 feet below the ground surface. Factors known to influence liquefaction potential include composition and thickness of soil layers, grain size, relative density, groundwater level, degree of saturation, and both intensity and duration of ground shaking.

The project site is located in an area mapped as potentially liquefiable on State of California Seismic Hazards Zone map (CDMG, 1998b) (Figure 5). The liquefaction potential of the subsurface soils was evaluated using the soil sampler blow counts recorded at various depths

in exploratory borings B-7 and B-9 and our laboratory test results. The liquefaction analysis was based on the National Center for Earthquake Engineering Research (NCEER) procedure (Youd, et al., 2001) developed from the methods originally recommended by Seed and Idriss (1982) using the computer program LiquefyPro (CivilTech Software, 2007). A design earthquake moment magnitude of 6.6 and an associated ground acceleration of 0.53g was used based on the published data for the site (CDMG, 1997). The reported historical shallow groundwater depth of 5 feet was used in our evaluation. Our liquefaction analysis for boring B-7 indicates that the soils between depths of approximately 12 and 16 feet, 21 and 25 feet and 50½ to 51½ feet are susceptible to liquefaction during the design seismic event. Our analysis for boring B-9, indicates the soils between depths of approximately 13 and 26 feet and 45 and 51½ feet are susceptible to liquefaction during the design seismic event.

9.4. Dynamic Settlement of Saturated Soils

As a result of liquefaction, the proposed structures may be subject to liquefaction-induced settlement. In order to estimate the amount of post-earthquake settlement, the method proposed by Tokimatsu and Seed (1987) was used in which the seismically induced cyclic stress ratios and corrected N-values are related to the volumetric strain of the soil. The amount of soil settlement during a strong seismic event depends on the thickness of the liquefiable layers and the density and/or consistency of the soils. Based on our analyses, we estimate total dynamic settlements of saturated soils on the order of 1.5 to 4 inches may occur at the project site as a result of liquefaction.

9.5. Dynamic Compaction of Dry Soils

Relatively dry soils (e.g., soils above the groundwater table) with low density or softer consistency tend to undergo a degree of compaction during a seismic event. Earthquake shaking often induces significant cyclic shear strain in a soil mass, which responds to the vibration by undergoing volumetric changes. Volumetric changes in dry soils take place primarily through changes in the void ratio (usually contraction in loose or normally consolidated soft soils, and dilation in dense or over-consolidated stiff soils) and secondarily through particle reorientation. Such volumetric changes are generally non-recoverable.

The estimated settlement induced by dynamic compaction of relatively dry soil layers above the historic high groundwater level (upper approximately 5 feet) was calculated using the method proposed by Tokimatsu and Seed (1987). Due to the clayey nature of the soils within the upper 5 feet, the dynamic settlement of the dry soil is negligible.

9.6. Landsliding

The site is located in an area of relatively flat terrain. There are no mapped landslides on site or in the vicinity, and landsliding is not considered to be a potential hazard at the site.

9.7. Flood Hazards, Tsunamis and Seiches

Based on our review of the Los Angeles County Flood Insurance Rate Map (FEMA, 2008), the subject site is located within a zone designated by the Federal Emergency Management Agency (FEMA) as an undetermined but possible flood hazard area (Zone D). Based on our review of the County of Los Angeles Safety Element (1990), the site is located within an area considered susceptible to flood or inundation hazards resulting from failure of the Castaic Lagoon (Lake) Dam as well as within a 100-year flood zone (Zone A).

Tsunamis are long wavelength, seismic, sea waves (long compared to ocean depth) generated by the sudden movements of the ocean floor during submarine earthquakes, landslides, or volcanic activity. Seiches are waves generated in a large, enclosed body of water. The project area is not mapped within an area considered susceptible to tsunamis or seiche inundation (County of Los Angeles Department of Regional Planning, 1990). Therefore, damage due to tsunamis or seiches is not a design consideration.

10. CONCLUSIONS

Based on the results of our evaluation, it is our opinion that the proposed Castaic Pool Complex project is feasible from a geotechnical standpoint, provided the recommendations presented in this report are incorporated into the design and construction of the planned project.

The primary geotechnical feature of concern at the site is the potential for soil liquefaction and dynamic settlement during a strong earthquake event. The results of our analysis indicate dy-

namic settlements on the order of 1.5 to 4 inches may occur. Mitigation of liquefaction hazards can vary from structural reinforcement of foundations (to avoid building collapse and life safety hazard) to ground improvements that reduce the potential of soil liquefaction from occurring. According to the County of Los Angeles Department of Public Works guidelines (County of Los Angeles, 2009) sites with no more than 4 inches of seismically induced settlement can be mitigated by structural improvements with shallow foundations.

Additional project geotechnical considerations include the following:

- The site is underlain by existing fill and alluvial soils. The fill soils generally consist of very loose to medium dense, clayey and silty sand up to a depth of approximately 7 feet. Alluvial soils consisted of loose to very dense, poorly and well graded sand with silt, clayey and silty sand, and sandy clay to the depths explored. Varying amounts of gravel were encountered at boring locations to the depths explored.
- Loose fill and loose alluvial soils may be subject to settlement under new foundation loads. In order to provide suitable support for the new improvements, the existing fill and loose alluvial soils should be overexcavated and recompacted. Based on our subsurface evaluation, we anticipate that removal depths will be on the order of 7 feet deep.
- Excavations for foundations, pavements, and underground utilities should be feasible with heavy duty earthmoving equipment. In general, we anticipate that the existing fill and alluvial soil generated from cuts may be re-used as compacted fill.
- On-site soils should be considered as Type C soils in accordance with Occupational Safety and Health Administration (OSHA) soil classifications. Sandy soil may be prone to caving during earthwork operations. Temporary shoring should be provided in accordance with OSHA regulations.
- Laboratory testing indicates that some of the near-surface soils on site have a medium expansion potential.
- The depth to groundwater was measured approximately 43.3 feet in boring B-9, approximately 19 hours after drilling. The historic high groundwater level is reported at a depth of approximately 5 feet below the surface.
- We estimated a PGA_{MCE} of 0.83g at the subject site that has a 2 percent probability of exceedance in 50 years. The design PGA was estimated to be 0.55g.
- Our laboratory corrosion testing indicates that the near-surface site soils can be classified as non-corrosive based on California Department of Transportation (Caltrans, 2003) corrosion guidelines.

In accordance with Section 111 of the Los Angeles County Building Code, it is our opinion that the site for the proposed structures will be safe from hazards associated with landsliding, settlement or slippage, provided the recommendations of this report are incorporated into the design plans and are implemented during construction. Further, it is our opinion that the proposed construction and associated grading will not impact the geologic stability of properties outside the site, provided the recommendations of this report are incorporated into the design plans and are implemented during construction.

11. RECOMMENDATIONS

The following sections include our geotechnical recommendations for the proposed construction. These recommendations are based on our evaluation of the site geotechnical conditions and our understanding of the planned construction, including anticipated foundation loads. Recommendations for mitigating the liquefaction potential are presented in this report. The recommendations, in general, include a recompacted and reinforced fill mat under the improvements. In the event the structural improvements can not tolerate up to 4 inches of dynamic settlement, it will be appropriate to perform alternative ground modification techniques. Preliminary alternatives for mitigating liquefaction hazards on site are presented for consideration. Detailed recommendations will be provided upon request. The proposed improvements should be constructed in accordance with the requirements of the applicable governing agencies.

11.1. Liquefaction Mitigation Alternatives

Our analyses indicate that the site may be subject to liquefaction during a design seismic event, resulting in liquefaction-induced ground settlement up to 4 inches. Without some type of mitigation, such ground deformation would damage the proposed structures. According to County of Los Angeles guidelines (County of Los Angeles, 2009) as well as the SP 117 guidelines (CGS, 2008), structural mitigation methods such as those described below in Section 11.1.1 can be used for supporting structures on shallow foundations. Other mitigation alternatives as described in Sections 11.1.2, 11.1.3 and 11.1.4 can also be used along with shallow foundations. Detailed recommendations will be provided after review and the appropriate method is selected.

11.1.1. Recompacted Mat

Excavation, recompacting and reinforcing the existing soil will aid in providing a damping effect on the dynamic settlement at depth. In general, a 3-foot thick or more reinforced fill zone should be provided under the proposed improvements such as the pools and administration building. The horizontal limits of over-excavation should generally extend beyond the edges of foundations so as to provide a prism of engineered compacted fill extending down from the foundations at an inclination of approximately 1:1 (horizontal to vertical). Details regarding the earthwork mitigation measure are presented in Section 11.2.3.

This alternative could be used in combination with foundation reinforcement to preclude building collapse. This alternative would not prevent liquefaction at greater depths or dynamic settlement.

11.1.2. Vibro-Compaction

The principle of vibro-compaction is to densify the loose granular soils at depth by vibration using a vibrating probe. This method is suitable for sands with less than 20 percent fines. It is our opinion that vibro-compaction may be used to reduce the potential for liquefaction at the site; however, it has some disadvantages. Ground surrounding the vibro-compaction probe will settle during construction and the densification effort from vibration may be limited for soils with more than 20 percent fines. The vibration associated with vibro-compaction may cause some damage to adjacent structures as well as annoy human beings. We recommend that a specialty contractor experienced in such remedial work be consulted for its effectiveness on the on-site soils prior to further design.

11.1.3. Stone Columns

The construction of stone columns involves the insertion of crushed stone in a grid pattern with a vibratory probe. The strength of the soil mass is increased due to the reinforcement of crushed stone and densification of surrounding soils. In addition, the potential for liquefaction of the subsurface soils is reduced with the improved drainage

provided by these stone columns. It is our opinion that stone columns are a suitable and feasible remedial measure for the proposed development. We recommend that a specialty contractor be retained to design the actual size, spacing, depth, and layout of the stone columns. In general, the stone columns would extend to a depth of approximately 35 feet below the existing ground surface and extend horizontally approximately 35 feet beyond the building footprint. Typically, stone columns range from approximately 2 feet to 3 feet in diameter and are spaced approximately 5 feet to 8 feet apart, center to center. However, the vibration associated with stone columns may cause some damage to adjacent structures and may also trigger complaints from people in the vicinity of the site.

11.1.4. Geopier System

Geopiers consist of compacted gravel columns that extend through the liquefiable soil layers. Like stone columns, the installation of Geopiers provides for an increase in soil strength as a result of the compacted gravel columns and increased densification of surrounding soils. In addition, the potential for liquefaction is reduced by the improved drainage of the gravel columns. The difference between Geopiers and stone columns is in their installation. Geopiers are installed by pushing a probe down to the desired depth and then ramming the hole with 12-inch-thick lifts of mechanically compacted gravel. Since the added compaction increases the shear strength between the soils and the Geopier™ system, a higher bearing capacity can be realized for design of shallow foundations.

It is our opinion that the Geopier™ system is a feasible remedial measure for the proposed development. We recommend that the Geopier Foundation Company be retained to design the actual size, spacing, depth, and layout of the Geopiers. In general, we would anticipate that the Geopiers, like stone columns, would extend to a depth of approximately 35 feet below the existing ground surface and extend horizontally approximately 20 feet beyond of the building footprint.

11.2. Earthwork

We anticipate that proposed earthwork at the site will consist of site clearing, overexcavation, fill placement, foundation excavation and utility line trenching. Earthwork will also include finish grading for establishment of site drainage. We understand that the finish grade elevation of the project site will be raised by adding approximately five feet of fill to the site. Earthwork operations should be performed in accordance with the requirements of applicable governing agencies and the recommendations presented in the following sections.

11.2.1. Construction Plan Review and Pre-Construction Conference

We recommend that the grading and foundation plans be submitted to Ninyo & Moore for review to check for conformance to the recommendations provided in this report. We further recommend that a pre-construction conference be held in order to discuss the grading recommendations presented in this report. The owner and/or their representative, the governing agencies' representatives, the civil engineer, Ninyo & Moore, and the contractor should be in attendance to discuss the work plan, project schedule, and earthwork requirements.

11.2.2. Site Clearing

Prior to commencing earthwork operations, the site should be cleared of existing vegetation, surface obstructions, foundation remnants and abandoned utilities (if present), rubble and debris. Existing utilities to remain in place should be re-routed or protected from damage by construction activities. Obstructions that extend below the finish grade, if any, should be removed and the resulting holes filled with compacted soil per Sections 11.2.6 and 11.2.7 of this report. The materials generated from the clearing operations should be removed from the site and disposed at a legal dump site.

11.2.3. Treatment of Existing Fill and Loose Alluvial Soils

Existing fill and loose alluvial soils may be subject to settlement under new foundation loads. Accordingly, we recommend that in general the existing fill and loose alluvial soils be overexcavated and recompacted in areas where additional fill soils and new

structures will be constructed. Based on our subsurface evaluation, we anticipate that removals depths will be on the order of 7 feet deep.

In order to mitigate the liquefaction potential, we recommend that subsequent to the overexcavation, a Tensar TriAx 160 geogrid or equivalent be placed at the bottom of the excavation in the area of the proposed building (habitable structure). Prior to the placement of the geogrid, the bottom of the excavation should be scarified to approximately 12-inches, moisture conditioned and compacted. A second layer of Tensar TriAx 160 or equivalent geogrid should be placed at a depth of approximately 2 feet above the bottom of the excavation.

The limits of the overexcavation should be evaluated by our representative at the time of construction. In general, the limits should extend out on an imaginary 1 to 1 (horizontal to vertical) plane from the bottom of the foundation and/or pool structure to the base of the excavation. Fill soils should be compacted to a relative compaction of 90 percent in accordance with ASTM D 1557.

As an alternative to providing a recompacted fill mat across the site, the existing fill and loose alluvial soils underlying non-structural areas such as pavements and hardscape areas could be scarified and recompacted to a depth of approximately 12 inches. This alternative does not preclude the potential for some soil settlement and increased pavement maintenance.

11.2.4. Excavation Characteristics

Based on the results of our exploratory borings and our experience with similar soils, it is our opinion that the on-site fill and alluvial soils can be excavated using earthmoving equipment in good working condition. Although oversize materials were not encountered in our borings, oversize materials should be anticipated during site grading. The contractor should be prepared to take appropriate measures to address the presence of oversize materials.

At the time of our evaluation, some wet near surface soils were observed. Depending on the time of year, some wet and soft conditions may be encountered at the time of construction.

11.2.5. Temporary Excavations

Excavations deeper than approximately 4 feet should be sloped at an inclination no steeper than 1½:1 (horizontal to vertical) or shored. Some surficial sloughing may occur. Temporary excavations should be evaluated in the field and constructed in accordance with applicable Occupational Safety and Health Administration (OSHA) guidelines. The on-site soils should be considered as OSHA Soil Type C. On-site safety of personnel is the responsibility of the contractor. Recommendations for temporary shoring can be provided, if requested.

Excavations should be planned in a manner so as not to impair the bearing capacity or cause settlement or undermining of existing building foundations. As a guideline, excavations adjacent to and subparallel to building foundations should not extend below an imaginary 1:1 (horizontal to vertical) plane extending outward and downward from the bottom outer edge of the foundations.

11.2.6. Fill Material

In general, the on-site earth materials should be suitable for reuse as fill and trench backfill. Foundation remnants and other buried over-size construction debris, if present, would not be considered suitable for reuse as fill. On-site and import fill soils should be free of expansive clays, trash, debris, roots, vegetation, or deleterious materials. Fill should generally be free of rocks or hard lumps of material greater than approximately 4 inches in diameter. Rocks or hard lumps larger than about 4 inches in diameter should be broken into smaller pieces or should be removed from the site. On site fill material with an expansion index of more than 50 should be placed 3 feet or more below the planned finish subgrade elevation.

11.2.7. Imported Fill Materials

Imported materials should consist of clean, granular material with a low expansion potential, corresponding to an expansion index of 50 or less as evaluated in accordance with ASTM D 4829 and R-value of 40 or more. Import material should be submitted to the project geotechnical consultant for review prior to importing to the site. The corrosion potential of proposed imported soils should also be evaluated if structures will be in contact with the imported soils. The contractor should be responsible for the uniformity of import material brought to the site.

11.2.8. Fill Placement and Compaction

Fill associated with the proposed construction activities should be placed and compacted in accordance with project specifications and sound construction practices. Fill materials should be compacted to a relative compaction of 90 percent as evaluated by ASTM D 1557. Aggregate base materials beneath pavements should be compacted to a relative compaction of 95 percent. Fill materials should be moisture conditioned to slightly above the optimum laboratory moisture content. The lift thickness for fill soils will vary depending on the type of compaction equipment used, but should generally be placed in horizontal lifts not exceeding 8 inches in loose thickness. Fill should be tested for specified compaction level by the geotechnical consultant.

In areas where the planned fill soils transition into the existing slope adjacent to Castaic Road, some benching into the existing materials should be performed. Details regarding the extent of benching should be evaluated at the time of construction.

11.3. Underground Utilities

Trenches and other excavations should conform to OSHA guidelines for shoring and/or temporary slopes. We recommend that utility lines be supported on 6 or more inches of granular bedding material such as sand with a sand equivalent (SE) value of 30 or higher. Bedding material should be placed around the pipe and 12 inches or more above the top of the pipe in accordance with specifications of the recent edition of the "Greenbook" (Standard Specifications for Public Works Construction). Special care should be taken not to allow voids

beneath the pipe. Bedding material and compaction requirements should be in accordance with the recommendations of this report, the project specifications, and applicable requirements of the appropriate governing agency.

11.3.1. Modulus of Soil Reaction

The modulus of soil reaction is used to characterize the stiffness of soil backfill placed along the sides of buried flexible pipelines for the purpose of evaluating deflection caused by the weight of the backfill above the pipe. We recommend that a modulus of soil reaction of 1,000 pounds per square inch (psi) be used for design, provided that granular bedding material be placed adjacent to the pipe, as recommended in the previous section.

11.4. Seismic Design Considerations

Design of the proposed improvements should be in accordance with the requirements of governing jurisdictions and applicable building codes and comply with the design for structures located in seismically active areas. Table 3 presents the seismic design parameters for the site in accordance with CBC (2007) guidelines and mapped spectral acceleration parameters (United States Geological Survey [USGS], 2009).

Table 3 – 2007 California Building Code Seismic Design Criteria

Seismic Design Factors	Value
Site Class	D
Site Coefficient, F_a	1.0
Site Coefficient, F_v	1.5
Mapped Spectral Acceleration at 0.2-second Period, S_s	2.078g
Mapped Spectral Acceleration at 1.0-second Period, S_1	0.870g
Spectral Acceleration at 0.2-second Period Adjusted for Site Class, S_{MS}	2.078g
Spectral Acceleration at 1.0-second Period Adjusted for Site Class, S_{M1}	1.304g
Design Spectral Response Acceleration at 0.2-second Period, S_{DS}	1.385g
Design Spectral Response Acceleration at 1.0-second Period, S_{D1}	0.870g

11.5. Foundations

The following recommendations provide design criteria for shallow foundation systems supported on low-expansion potential compacted soil reinforced with two layers of Tensar TriAx 160 or equivalent geogrids. Our evaluation indicated that in addition to the estimated static settlement of one inch or less, a total liquefaction-induced dynamic settlement of 4 inches may occur during the design seismic event. The differential dynamic settlement is estimated to be 2 inches over a distance of 30 feet. Based on our review of a recent state-of-the-art publication in liquefaction mitigation for shallow foundations (Bouckovalas and Dakoulas, 2006), a shallow-foundation supported, light-weight structure bearing on a non-liquefiable soil crust (between the foundation and the liquefiable soil), general performed satisfactorily during a major earthquake event provided the ratio of the thickness of the non-liquefiable layer to the width of the footing be designed appropriately. Our analysis indicated that the width of the footing should be 8 feet or less for the proposed Pool Building/Recreation Office. Please note that the objective of our design recommendation is to prevent a collapse for the building during the design seismic event. The building may need some repair to restore its function or may require demolition after a major earthquake event. Depending on the type of liquefaction mitigation implemented, these recommendations may be subject to change. Additional recommendations will be provided upon request. Foundations should be designed in accordance with structural considerations and the following recommendations. In addition, requirements of the governing jurisdictions and applicable building codes should be considered in the design of the proposed structures.

11.5.1. Mat Foundations

Mat foundations should be supported on low expansion potential, compacted fill prepared in accordance with the recommendations presented in this report.

Mat foundations may be designed using a net allowable bearing capacity of 2,000 pounds per square foot (psf) when founded in compacted fill. The total and differential static settlements corresponding to this allowable bearing load are estimated to be on the order of approximately 1 inch and ½ inch over a horizontal distance of 40 feet, respectively.

Mat foundations typically experience some deflection due to loads placed on the mat and the reaction of the soils directly underlying the mat. A design modulus of subgrade reaction (K) of 150 pounds per cubic inch (pci) may be used for the subgrade soils while evaluating such load-induced deflections. The coefficient of subgrade reaction for a mat of a specific width, K_v , may be evaluated using the following equation:

$$K_v = K[(B+1)/2B]^2 \text{ (pci);}$$

Where, B is the width of the mat.

11.5.2. Spread Footings

Spread footings for building structures should extend 18 inches or more below the adjacent finished grade and bear on engineered fill soils compacted to 90 percent relative compaction or more. Continuous footings should have a width of 18 inches or more. Isolated pad footings should have a width of 36 inches or more. In addition, the width of the footing should be limited to 8 feet or less. Spread footings should be reinforced with two No. 4 steel reinforcing bars, one placed near the top and one placed near the bottom of the footings, and further detailed in accordance with the recommendations of the structural engineer.

Footings, as described above and bearing on compacted fill soils with low expansion potential, may be designed using an allowable bearing capacity of 2,000 pounds per square foot (psf). Total and differential static settlement for footings under static load are estimated to be less than approximately 1 inch and ½ inch over a horizontal span of 40 feet, respectively.

Footings bearing on compacted fill may be designed using a coefficient of friction of 0.30, where the total frictional resistance equals the coefficient of friction times the dead load. Footings may be designed using a passive resistance of 300 psf per foot of depth for level ground condition up to a value of 3,000 psf. The allowable lateral resistance can be taken as the sum of the frictional resistance and passive resistance provided the passive resistance does not exceed one-half of the total allowable resistance. The

passive resistance may be increased by one-third when considering loads of short duration such as wind or seismic forces.

11.5.3. Light Pole Supports

Drilled pier foundations for the light poles may be designed using allowable side friction and end bearing values of 200 psf and 3,000 psf, respectively, under static loading conditions. The lateral capacity of drilled piers may be evaluated using a passive resistance of 250 psf per foot of depth, up to a value of 2,500 psf per foot of depth. The passive resistance may be considered to act on an area equal to the product of the effective width (two times the pier diameter) and the embedded length of the pier. The passive resistance should be ignored to a depth of one pier diameter below the finished grade if the pier is not constrained at the ground surface by a rigid slab or pavement

11.5.4. Building Floor Slabs

Slabs-on-grade should have a thickness of 5 inches or more, based on structural design considerations. The slab should be reinforced with No. 4 steel reinforcing bars placed 18 inches on-center (each way) in the middle one-third of the slab height. The proper placement of the reinforcement in the slab is vital for satisfactory performance. The slab should be underlain by a 2-inch-thick layer of clean sand over a polyethylene vapor retarder, 10-mil or thicker, further underlain by a 4-inch-thick layer of sand or gravel with a particle size of approximately $\frac{3}{4}$ -inch or smaller. The vapor retarder is recommended in areas where moisture-sensitive floor coverings are anticipated. Soils underlying the slabs should be moisture conditioned to slightly above the laboratory optimum and compacted in accordance with the recommendations presented in the Earthwork section of this report. Joints should be constructed at intervals designed by the structural engineer to help reduce random cracking of the slab.

11.5.5. Exterior Slabs-On-Grade

Exterior walkways and flatwork should have a thickness of 4 inches or more and should be reinforced with No. 4 steel reinforcing bars placed at 24 inches center to center.

Exterior slabs should be supported on compacted low expansion potential soil. The vapor retarder may be omitted where moisture sensitive surfaces are not involved.

11.6. Pool Design

The depths of the proposed pools/splash pad for the site will vary from about 3 to about 15 feet deep. We anticipate that pool/splash pad walls and floor will consist of approximately 6-inches-thick gunite or concrete. The recommendations relative to pools/splash pad construction are presented in the following sections.

11.6.1. Lateral Earth Pressures

Swimming pool walls should be designed using lateral earth pressures presented on Figure 7. Pool walls should also be designed to resist lateral surcharge pressures imposed by any adjacent footings or structures in addition to the above lateral earth pressures. Although groundwater was not encountered during our field exploration, the proposed swimming pool should be designed to withstand the uplift (buoyancy) pressure should the groundwater or seepage level be risen to the historical high groundwater level which is at approximately 5 feet below the existing ground surface. With a proposed 5 feet of fill placed over the existing ground surface, we recommend that the swimming pool be designed with a groundwater level at a depth of 10 feet. To resist uplift pressure, the slab can be extended outside the exterior walls of the swimming pool (flanges). The resistance to uplift may then be taken as the sum of the weight of the swimming pool and the weight of the wedge of soil within the zone of influence of the flanges (Figure 8).

11.6.2. Stability of Temporary Pool Excavations

Slope setback requirements of the governing jurisdictions and applicable building codes should be followed during pool excavation operations. Any cuts exposed to seasonal precipitation or uncontrolled surface runoff may be easily eroded. Excavations should be performed in accordance with Occupational Safety and Health Administration's (OSHA's) regulations. The site soils should be considered as Type C soils in accordance

with OSHA guidelines. Temporary slope excavations should be evaluated in the field by Ninyo & Moore. Forming of the pool walls may be required.

After the swimming pool walls are constructed, the backfill placed between the walls and temporary excavated slopes should be compacted. Backfill materials should be placed in uniform lifts not exceeding 8 inches in loose thickness, moisture conditioned as appropriate to achieve in-place moisture contents slightly above the laboratory optimum, and then mechanically compacted to a relative compaction of 90 percent or more as evaluated by the latest edition of ASTM D 1557. Flooding or jetting of the backfill should be avoided.

11.6.3. Temporary Access Ramps

Backfill materials placed within temporary access ramps extending into the pool excavations should be properly compacted and tested. This will mitigate excessive settlement of the backfill and subsequent damage to pool decking or other structures placed on the backfill.

11.6.4. Pool Bottom

The pool bottom should rest on a re-compacted fill mat, as previously recommended in Section 11.2.3 to reduce the potential for differential settlement of the pool. The pool subgrade should be evaluated by Ninyo & Moore prior to placement of reinforcements. If relatively soft or loose soils are exposed at the pool subgrade, such materials should be removed and replaced as fill compacted to a relative compaction of 90 percent or more as evaluated by the latest edition of ASTM D 1557.

11.6.5. Pool Decking

In order to reduce the potential for shrinkage cracking, the pool decking should be 4 inches thick and provided with construction joints or expansion joints at an interval of every 6 feet or less. As a further measure to reduce cracking of pool decking, the subgrade soils below the decking should be compacted as previously recommended in Section 11.2.3.

11.7. On-site Infiltration System Design Criteria

Based on the percolation testing, the percolation rate in the silty sand alluvial soil encountered below a depth of approximately 3 feet at borings B-14 and B-15 was on the order of 10^{-3} centimeters per second. It should be noted that rates can vary within the alluvial soils at the site. For planning purposes, a percolation rate of 5 gallons per square foot per day could be considered when designing the on-site infiltration system.

11.8. Preliminary Pavement Design

We understand that Castaic Road in front of the subject site will be widened to accommodate traffic into the new pool complex. Based on our subsurface evaluation, the structural section along the improved edge of Castaic Road (boring B-13) was approximately 5 inches of asphalt concrete on approximately 5 inches of aggregate base. We further understand the new widening will match the existing section. Our scope of work did not include an evaluation of the subgrade soils under the area of the widening. Final design recommendations for Castaic Road widening should be based on an evaluation of the subgrade soils and the design traffic index.

For the design of asphalt concrete pavements on site we used the methodology presented in the Caltrans Highway Design Manual (Caltrans, 2006) and the computer program CalFP (Caltrans, 2008). We evaluated the proposed pavement for an assumed traffic index (TI) value of 5 using a design R-value of 38 (on site soils). In light of the planned grading including imported fill soils, final pavement design recommendations should be based on an evaluation of the subgrade materials at the time of construction and on actual anticipated traffic loading conditions. We recommend that the preliminary pavement section for the pavement on-site consist of 3 inches of asphalt concrete over 4½ inches of aggregate base.

For the design of rigid pavements (Portland cement concrete) on site we used the methodology presented in the Navy Pavement Design Manual (1979). We evaluated the proposed pavement section assuming a TI value of 5. Based on our analysis, we recommend that the preliminary PCC pavement section consist of 5½ inches of concrete.

Subgrade soils in areas to be paved should be prepared as recommended in the Earthwork section of this report. Prior to placement of aggregate base materials, we recommend that the top 12 inches of subgrade soils be scarified and compacted to a relative compaction of 90 percent in accordance with ASTM D 1557. Aggregate base material should conform to the latest specifications in Section 200-2.2 for crushed aggregate base or Section 200-2.4 for crushed miscellaneous base of the Greenbook and should be compacted to a relative compaction of 95 percent in accordance with ASTM D 1557. Asphalt concrete should conform to Section 203-6 of the Greenbook and should be compacted to a relative compaction of 95 percent in accordance with ASTM D 1557.

We recommend that the paving operations be observed and tested by Ninyo & Moore. We further recommend that mix designs be made for the asphalt concrete by an engineering company specialized in this type of work.

11.9. Corrosivity

The corrosion potential of the site soils was evaluated based on laboratory testing of a representative sample obtained from our exploratory borings. Laboratory testing was performed to evaluate pH, electrical resistivity, chloride and sulfate content. The laboratory test results are presented in Appendix B.

The pH of the tested samples was approximately 7.2, the electrical resistivity were measured at approximately 2,815 and 10,050 ohm-centimeters, the chloride content was approximately 65 parts per million (ppm), and the sulfate contents was measured at approximately 0.001 percent. Based on the laboratory test results and Caltrans (2003) corrosion criteria, the project site can be classified as a non-corrosive site, which is defined as having earth materials with less than 500 ppm chlorides, less than 0.20 percent sulfates (i.e., 2,000 ppm), a pH of 5.5 or more, or an electrical resistivity of 1,000 ohm-centimeters or more.

11.10. Concrete Placement

In order to reduce the potential for shrinkage cracks in the concrete during curing, we recommend that the concrete for the proposed structures be placed with a slump of 4 inches

based on ASTM C 143. The slump should be checked periodically at the site prior to concrete placement. We also recommend that crack control joints be provided in slabs in accordance with the recommendations of the structural engineer to reduce the potential for distress due to minor soil movement and concrete shrinkage. We further recommend that concrete cover over reinforcing steel for slabs-on-grade and foundations be provided in accordance with CBC (2007). The structural engineer should be consulted for additional concrete specifications.

Concrete in contact with soil or water that contains high concentrations of water-soluble sulfates can be subject to premature chemical and/or physical deterioration. The samples tested during this evaluation indicated a water-soluble sulfate content of approximately 0.001 percent by weight (i.e., about 10 ppm). Based on the CBC criteria (CBC, 2007), the potential for sulfate attack is low for water-soluble sulfate contents in soils less than 0.10 percent by weight (1,000 ppm), indicating that the on-site soils may be considered to have a low potential for sulfate attack. Therefore, based on CBC criteria (CBC, 2007), Type II, IP(MS), or IS(MS) cement should be used for concrete construction.

11.11. Drainage

Good surface drainage is imperative for satisfactory site performance. Positive drainage should be provided and maintained to transport surface water away from foundations and off site. Positive drainage is defined as a slope of 2 percent or more over a distance of 5 feet or more away from structure foundations and top of slopes. Runoff should then be transported by the use of swales or pipes into a collective drainage system. Surface waters should not be allowed to flow over slope faces or pond adjacent to footings and/or structures. Area drains for landscaped and paved areas are recommended. Nearby landscaping should consist of drought-tolerant plants, and landscape irrigation should be kept to a level just sufficient to maintain plant vigor. Overwatering should not be permitted.

12. CONSTRUCTION OBSERVATION

The recommendations provided in this report are based on our understanding of the proposed project and on our evaluation of the data collected based on subsurface conditions disclosed by widely spaced exploratory borings. It is imperative that the interpolated subsurface conditions be checked by our representative during construction. Observation and testing of compacted fill and backfill should also be performed by our representative during construction. We further recommend that the project plans and specifications be reviewed by this office prior to construction. In addition, we should review the plans and specifications prior to construction. It should be noted that, upon review of these documents, some recommendations presented in this report might be revised or modified.

During construction, we recommend that the duties of the geotechnical consultant include, but not be limited to:

- Observing clearing, grubbing, and removals.
- Observing excavation bottoms and the placement and compaction of fill, including trench backfill.
- Evaluating imported materials prior to their use as fill.
- Performing field tests to evaluate fill compaction.
- Observing foundation excavations for bearing materials and cleaning prior to placement of reinforcing steel or concrete.

The recommendations provided in this report assume that Ninyo & Moore will be retained as the geotechnical consultant during the construction phase of this project. If another geotechnical consultant is selected, we request that the selected consultant indicate to the County and to our firm in writing that our recommendations are understood and that they are in full agreement with our recommendations.

13. LIMITATIONS

The field evaluation, laboratory testing, and geotechnical analyses presented in this geotechnical report have been conducted in general accordance with current practice and the standard of care

exercised by geotechnical consultants performing similar tasks in the project area. No warranty, expressed or implied, is made regarding the conclusions, recommendations, and opinions presented in this report. There is no evaluation detailed enough to reveal every subsurface condition. Variations may exist and conditions not observed or described in this report may be encountered during construction. Uncertainties relative to subsurface conditions can be reduced through additional subsurface exploration. Additional subsurface evaluation will be performed upon request. Please also note that our evaluation was limited to assessment of the geotechnical aspects of the project, and did not include evaluation of structural issues, environmental concerns, or the presence of hazardous materials.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document.

This report is intended for design purposes only. It does not provide sufficient data to prepare an accurate bid by contractors. It is suggested that the bidders and their geotechnical consultant perform an independent evaluation of the subsurface conditions in the project areas. The independent evaluations may include, but not be limited to, review of other geotechnical reports prepared for the adjacent areas, site reconnaissance, and additional exploration and laboratory testing.

Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. If geotechnical conditions different from those described in this report are encountered, our office should be notified, and additional recommendations, if warranted, will be provided upon request. It should be understood that the conditions of a site could change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

14. REFERENCES

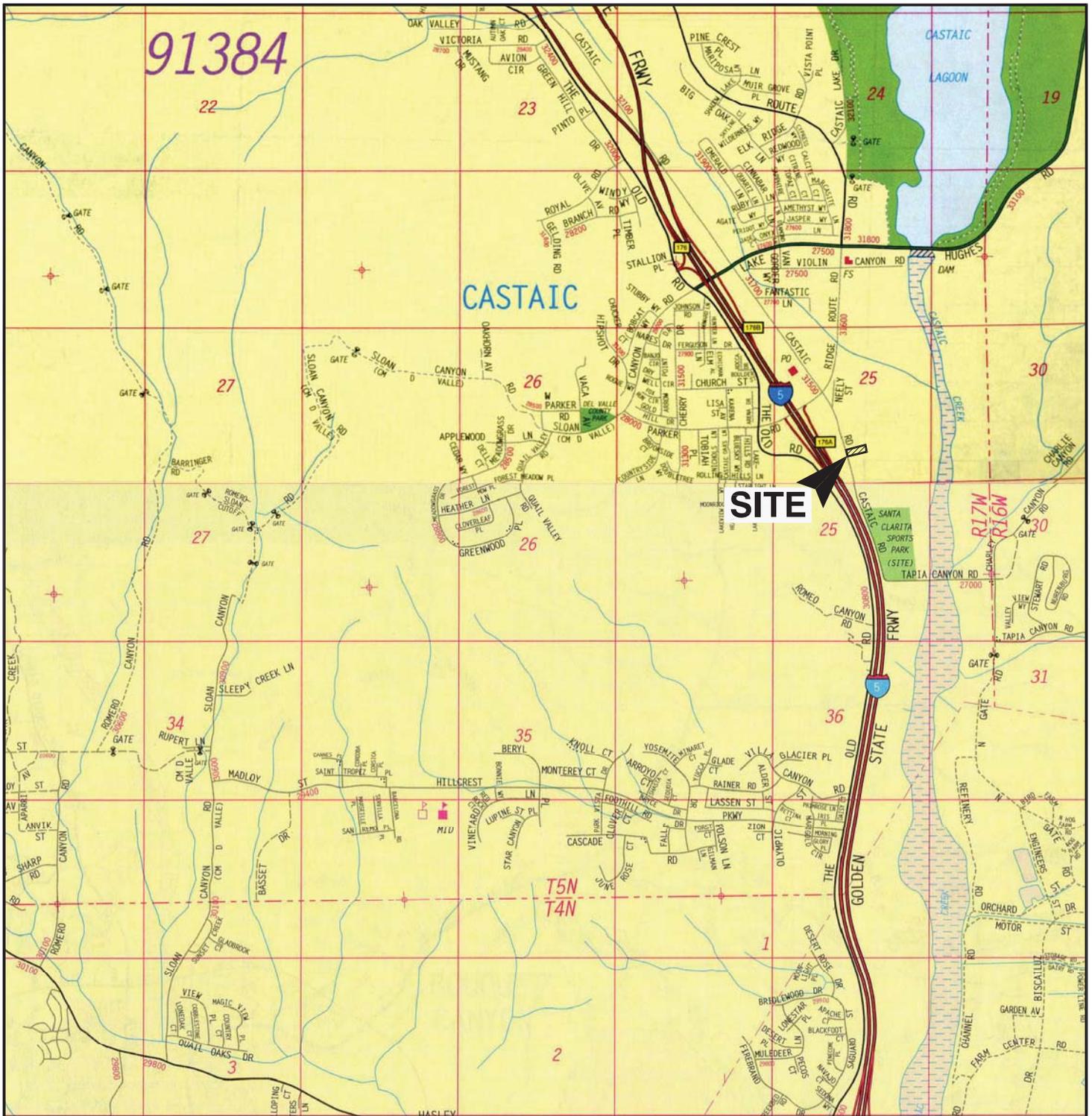
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AERIAL PHOTOGRAPHS				
Source	Scale	Date	Flight	Numbers
USDA	1:20,000	11-3-52	AXJ-2K	82 and 83

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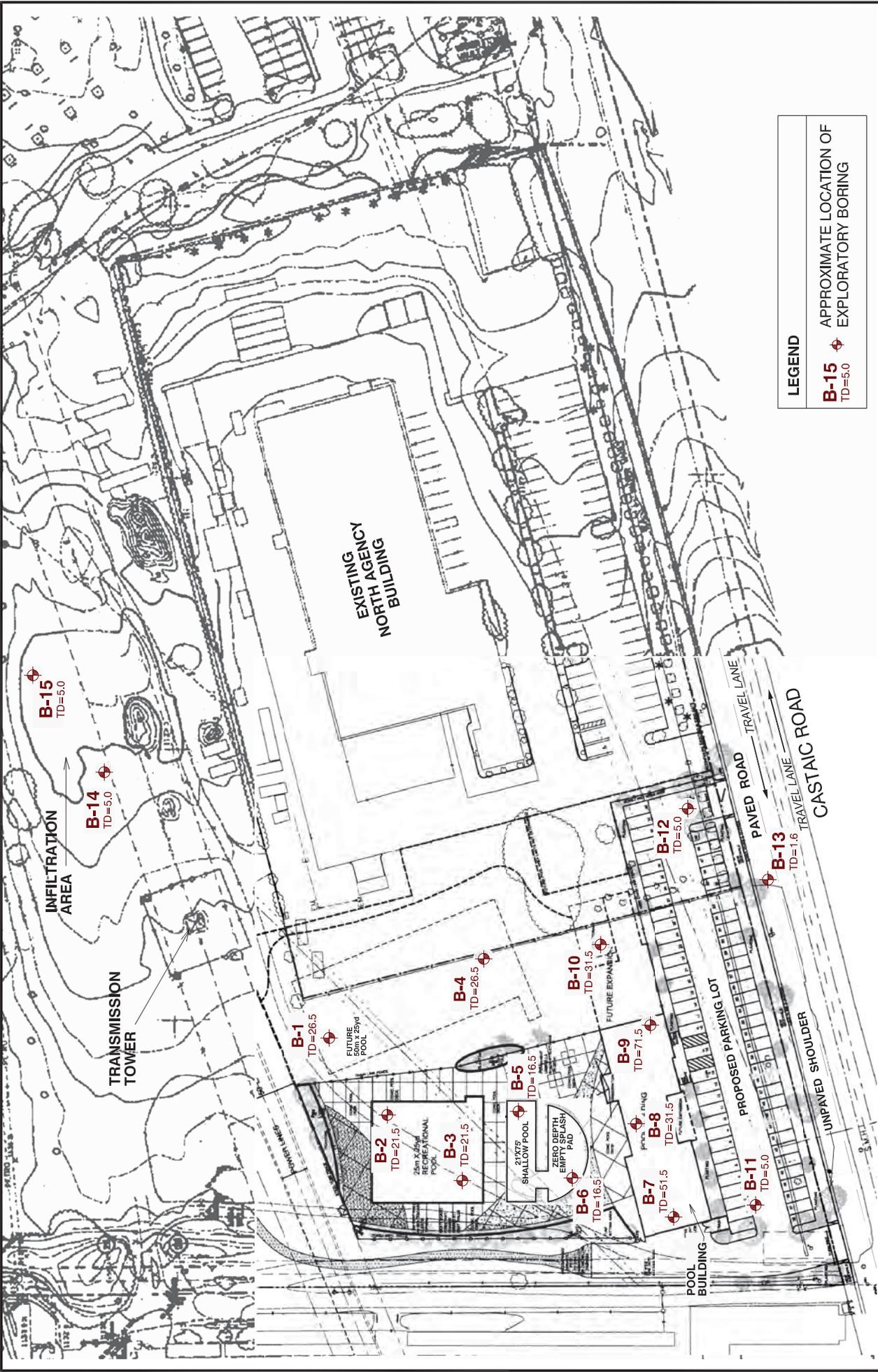
REFERENCE: 2007 THOMAS GUIDE FOR LOS ANGELES/ORANGE COUNTIES, STREET GUIDE AND DIRECTORY

APPROXIMATE SCALE IN FEET

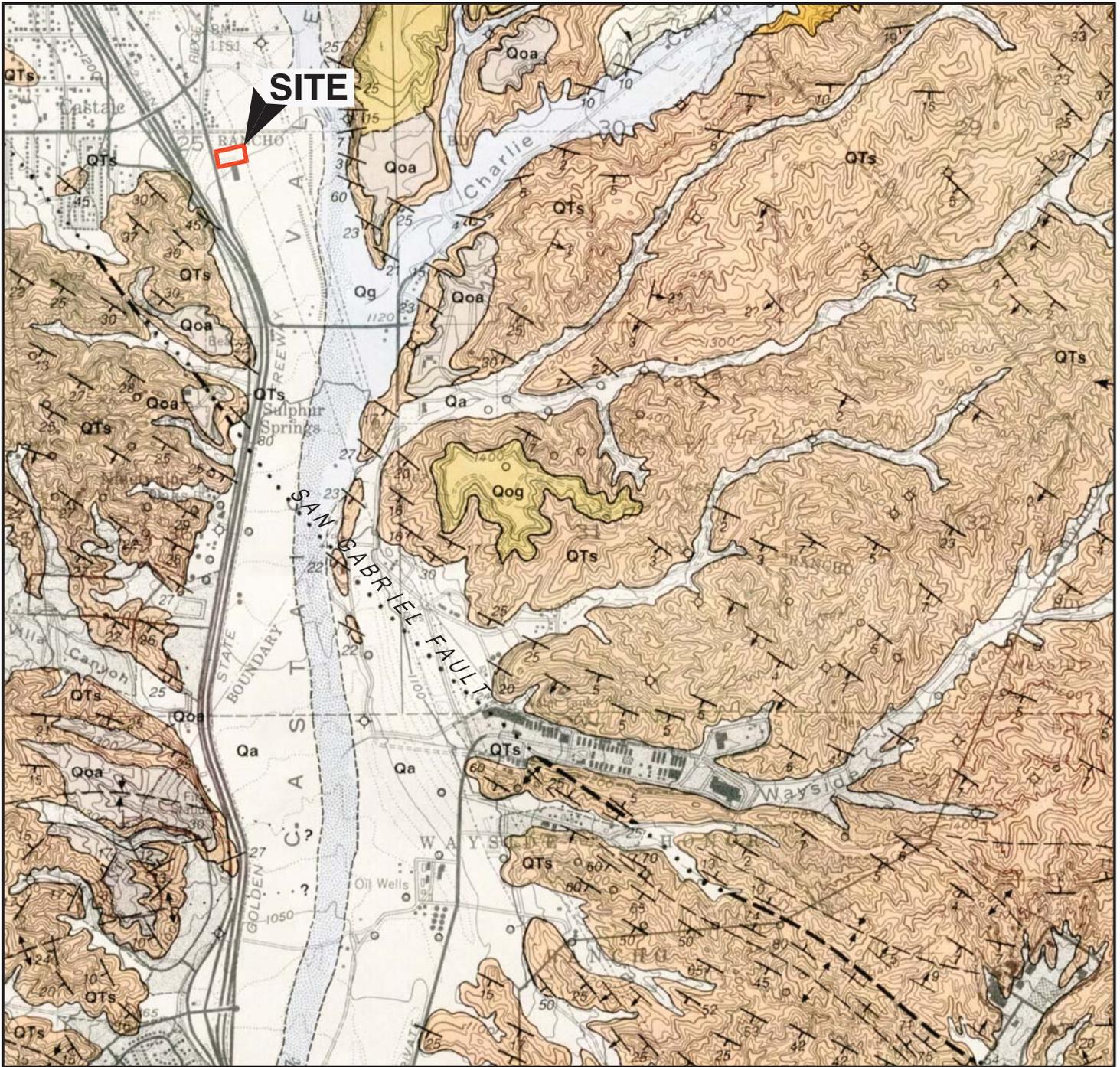


NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.
Map © Rand McNally, R.L.07-S-129

		SITE LOCATION MAP		FIGURE 1



207247_A2.DWG



REFERENCE: GEOLOGIC MAP OF THE NEWHALL QUADRANGLE, LOS ANGELES COUNTY, CALIFORNIA BY THOMAS W. DIBBLEE JR., 1996.

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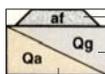
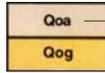
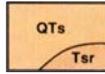


APPROXIMATE SCALE IN FEET



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND

-  APPROXIMATE GEOLOGIC CONTACT
-  APPROXIMATE LOCATION OF FAULT
-  ARTIFICIAL FILL
GRAVEL AND SAND
ALLUVIUM
-  ALLUVIAL GRAVEL AND SAND
-  SAUGUS FORMATION



REGIONAL GEOLOGIC MAP

FIGURE

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DATE 4/10

CASTAIC POOL COMPLEX
CASTAIC, CALIFORNIA

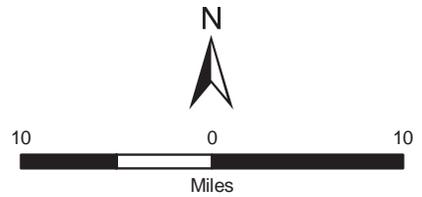
3



GIS DATA SOURCE: CALIFORNIA GEOLOGICAL SURVEY (CGS); ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE (ESRI)
 REFERENCE: JENNINGS, 1994, FAULT ACTIVITY MAP OF CALIFORNIA AND ADJACENT AREAS

LEGEND	
FAULT ACTIVITY:	
 HISTORICALLY ACTIVE	 LATE QUATERNARY
 HOLOCENE ACTIVE	 QUATERNARY
 COUNTY BOUNDARIES	

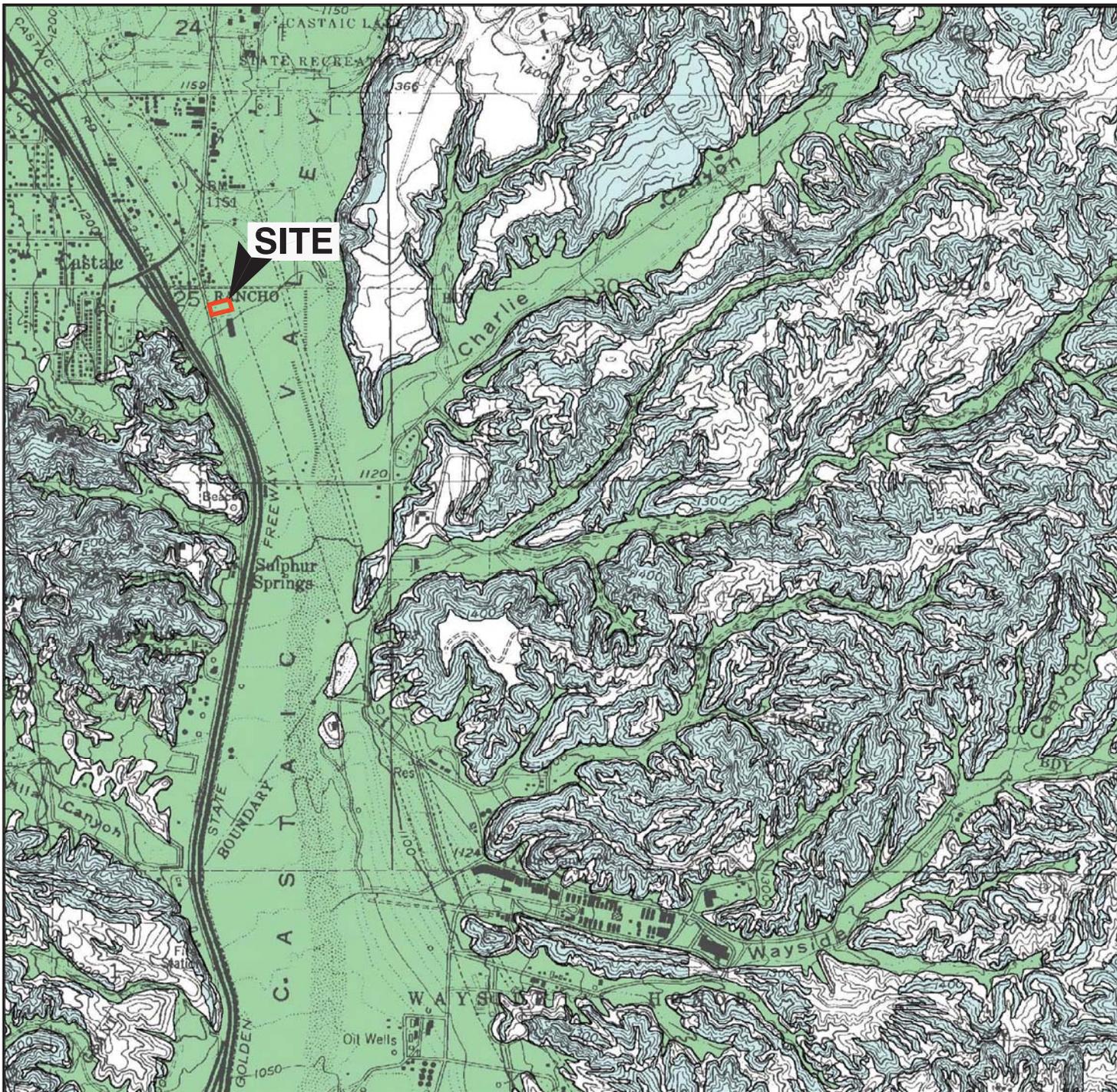
NOTE: ALL DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE



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Ninyo & Moore		FAULT LOCATION MAP	FIGURE
PROJECT NO.	DATE	CASTAIC POOL COMPLEX CASTAIC, CALIFORNIA	4
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REFERENCE: SEISMIC HAZARDS ZONES OFFICIAL MAP, NEWHALL QUADRANGLE BY CALIFORNIA DEPARTMENT OF MINES AND GEOLOGY, STATE OF CALIFORNIA, 1998.

MAP EXPLANATION

Zones of Required Investigation:

Liquefaction

Areas where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.



Earthquake-Induced Landslides

Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.



APPROXIMATE SCALE IN FEET



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.



SEISMIC HAZARD ZONES MAP

FIGURE

PROJECT NO.

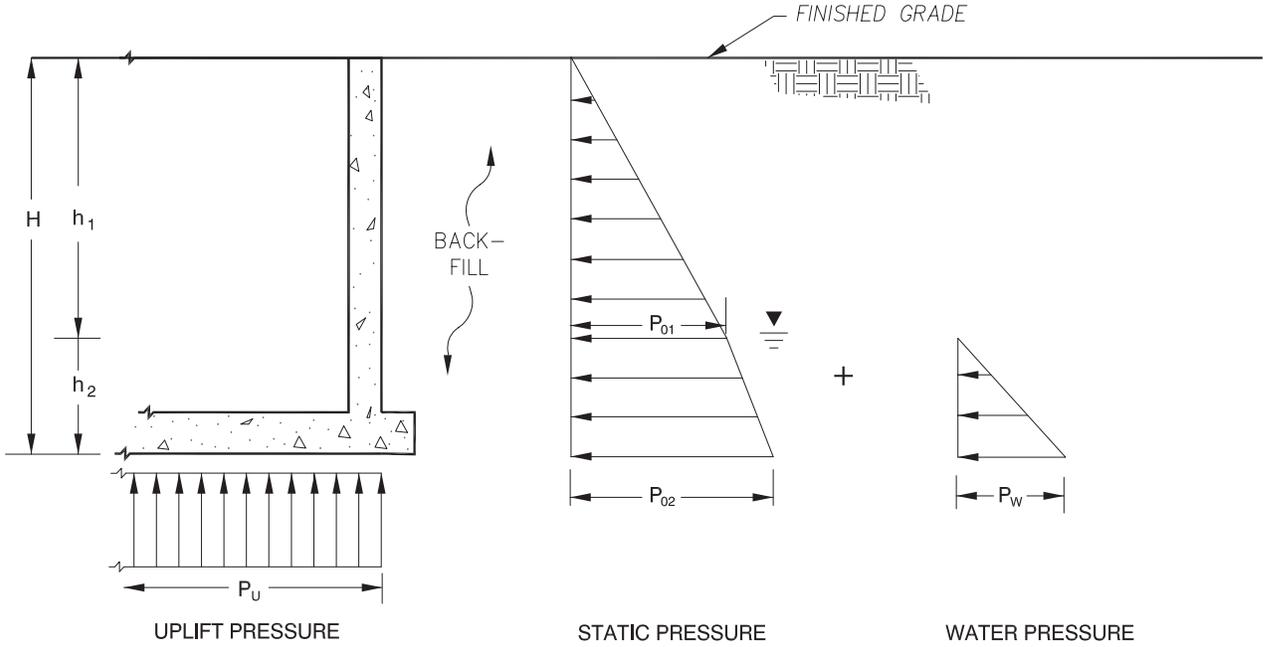
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CASTAIC, CALIFORNIA

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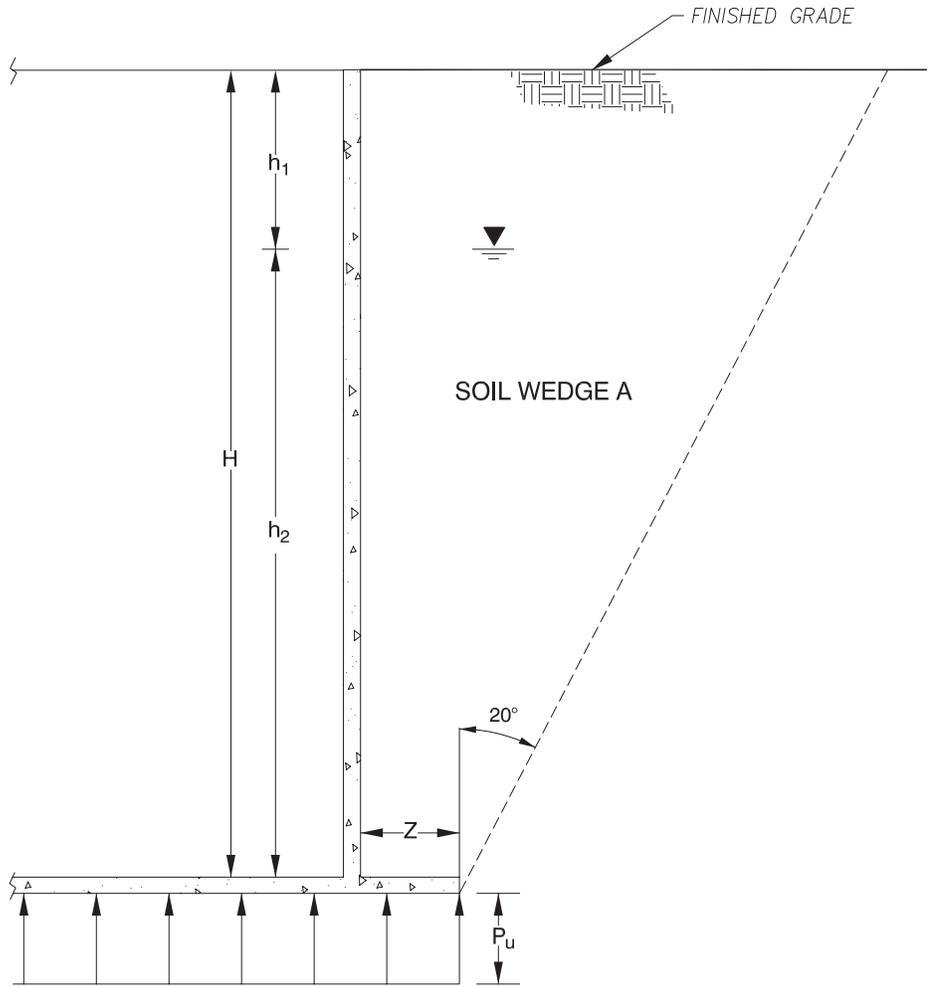
NOTES:

1. APPARENT LATERAL EARTH PRESSURES, P_{01} AND P_{02}
 $P_{01} = 44 h_1$ psf
 $P_{02} = 44 h_1 + 21 h_2$ psf
2. WATER PRESSURE, P_w
 $P_w = 62.4 h_2$ psf
3. UPLIFT PRESSURE, P_u
 $P_u = 62.4 h_2$ psf
4. SURCHARGE PRESSURES CAUSED BY VEHICLES OR NEARBY STRUCTURES ARE NOT INCLUDED
5. H , h_1 AND h_2 ARE IN FEET
6. GROUNDWATER TABLE; h_1 IS ASSUMED TO BE 10 FEET FOR DESIGN

NOT TO SCALE

207247_A6.DWG

Ninyo & Moore		LATERAL EARTH PRESSURES FOR SWIMMING POOLS	FIGURE
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RESISTANCE TO UPLIFT = WEIGHT OF STRUCTURE + WEIGHT OF SOIL WEDGE A

NOTES:

1. UNIT WEIGHT OF SOILS, γ OR γ_b
 $\gamma = 120$ pcf ABOVE GROUNDWATER TABLE
 $\gamma_b = 57$ pcf BELOW GROUNDWATER TABLE
2. UPLIFT PRESSURE, P_u
 $P_u = 62.4 h_2$ psf
3. H, Z, h_1 AND h_2 ARE IN FEET
4.  GROUNDWATER TABLE, h_1 IS ASSUMED TO BE 10 FEET FOR DESIGN

NOT TO SCALE

207247_A7.DWG

Ninyo & Moore		UPLIFT RESISTANCE DIAGRAM FOR SWIMMING POOLS	FIGURE
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APPENDIX A

BORING LOGS

Field Procedure for the Collection of Disturbed Samples

Disturbed soil samples were obtained in the field using the following methods.

Bulk Samples

Bulk samples of representative earth materials were obtained from the exploratory borings. The samples were bagged and transported to the laboratory for testing.

The Standard Penetration Test (SPT) Sampler

Disturbed drive samples of earth materials were obtained by means of a Standard Penetration Test spoon sampler. The sampler is composed of a split barrel with an external diameter of 2 inches and an unlined internal diameter of 1³/₈ inches. The sampler was driven into the ground 18 inches with a 140-pound hammer falling freely from a height of 30 inches in general accordance with ASTM D 1586. The blow counts were recorded for every 6 inches of penetration; the blow counts reported on the logs are those for the last 12 inches of penetration. Soil samples were observed and removed from the spoon, bagged, sealed and transported to the laboratory for testing.

Field Procedure for the Collection of Relatively Undisturbed Samples

Relatively undisturbed soil samples were obtained in the field using the following method.

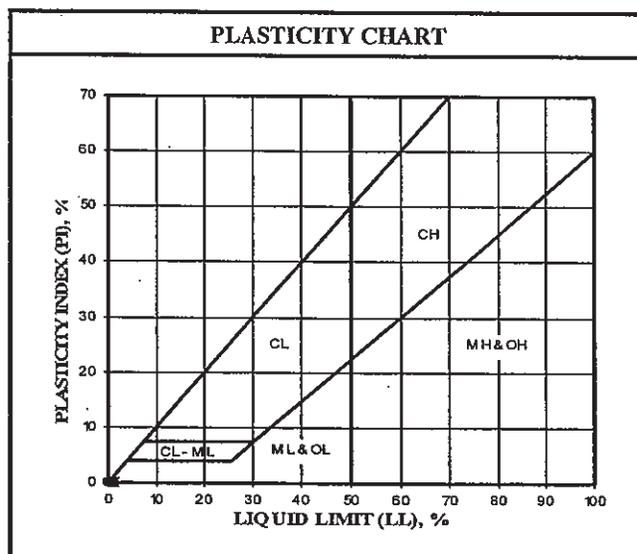
The Modified Split-Barrel Drive Sampler

The sampler, with an external diameter of 3 inches, was lined with 1-inch-long, thin brass rings with inside diameters of approximately 2.4 inches. The sample barrel was driven into the ground with the weight of a 140-pound hammer in general accordance with ASTM D 3550. The driving weight was permitted to fall freely from a height of 30 inches. The number of blows per foot of driving are presented on the boring logs as an index to the relative resistance of the materials sampled. The samples were removed from the sample barrel in the brass rings, sealed, and transported to the laboratory for testing.

U.S.C.S. METHOD OF SOIL CLASSIFICATION

MAJOR DIVISIONS	SYMBOL	TYPICAL NAMES		
COARSE-GRAINED SOILS (More than 1/2 of soil >No. 200 sieve size)	GRAVELS (More than 1/2 of coarse fraction > No. 4 sieve size)	GW	Well graded gravels or gravel-sand mixtures, little or no fines	
		GP	Poorly graded gravels or gravel-sand mixtures, little or no fines	
		GM	Silty gravels, gravel-sand-silt mixtures	
		GC	Clayey gravels, gravel-sand-clay mixtures	
	SANDS (More than 1/2 of coarse fraction <No. 4 sieve size)	SW	Well graded sands or gravelly sands, little or no fines	
		SP	Poorly graded sands or gravelly sands, little or no fines	
		SM	Silty sands, sand-silt mixtures	
		SC	Clayey sands, sand-clay mixtures	
		SILTS & CLAYS Liquid Limit <50	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean
OL	Organic silts and organic silty clays of low plasticity			
SILTS & CLAYS Liquid Limit >50	MH		Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	
	CH		Inorganic clays of high plasticity, fat clays	
	OH		Organic clays of medium to high plasticity, organic silty clays, organic silts	
HIGHLY ORGANIC SOILS		Pt	Peat and other highly organic soils	

GRAIN SIZE CHART		
CLASSIFICATION	RANGE OF GRAIN SIZE	
	U.S. Standard Sieve Size	Grain Size in Millimeters
BOULDERS	Above 12"	Above 305
COBBLES	12" to 3"	305 to 76.2
GRAVEL Coarse Fine	3" to No. 4 3" to 3/4" 3/4" to No. 4	76.2 to 4.76 76.2 to 19.1 19.1 to 4.76
SAND Coarse Medium Fine	No. 4 to No. 200 No. 4 to No. 10 No. 10 to No. 40 No. 40 to No. 200	4.76 to 0.075 4.76 to 2.00 2.00 to 0.420 0.420 to 0.075
SILT & CLAY	Below No. 200	Below 0.075



Ninyo & Moore

U.S.C.S. METHOD OF SOIL CLASSIFICATION

BORING LOG EXPLANATION SHEET

DEPTH (feet)	Bulk Driven SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.
0	■					Bulk sample.
	▨					Modified split-barrel drive sampler.
	▧					No recovery with modified split-barrel drive sampler.
	▩					Sample retained by others.
	▪					Standard Penetration Test (SPT).
5	▫					No recovery with a SPT.
	▬	XX/XX				Shelby tube sample. Distance pushed in inches/length of sample recovered in inches.
	▭					No recovery with Shelby tube sampler.
	▮					Continuous Push Sample.
10	⊖		⊖			Seepage.
	⊖		⊖			Groundwater encountered during drilling.
	⊖		⊖			Groundwater measured after drilling.
					▨	SM ALLUVIUM: Solid line denotes unit change.
					- - -	Dashed line denotes material change.
15						Attitudes: Strike/Dip b: Bedding c: Contact j: Joint f: Fracture F: Fault cs: Clay Seam s: Shear bss: Basal Slide Surface sf: Shear Fracture sz: Shear Zone sbs: Sheared Bedding Surface
20						The total depth line is a solid line that is drawn at the bottom of the boring.



BORING LOG

EXPLANATION OF BORING LOG SYMBOLS

PROJECT NO.

DATE
Rev. 01/03

FIGURE

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/18/10</u> BORING NO. <u>B-1</u>		
	Bulk	Driven						GROUND ELEVATION <u>1,130± (MSL)</u> SHEET <u>1</u> OF <u>2</u>		METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>
0								DRIVE WEIGHT <u>140 lbs. (Auto. Trip Hammer)</u> DROP <u>30"</u>		
			17				SC	SAMPLED BY <u>VAM</u> LOGGED BY <u>VAM</u> REVIEWED BY <u>JJB</u>		
								DESCRIPTION/INTERPRETATION		
								<u>ALLUVIUM:</u> Brown, moist, medium dense, clayey SAND with scattered silty sand lenses.		
							SP-SM	Yellowish brown, moist, medium dense, poorly graded SAND with gravel and silt.		
10			38	12.4	98.2					
								Medium dense.		
15			25							
20										



BORING LOG

CASTAIC POOL COMPLEX
CASTAIC, CALIFORNIA

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FIGURE
A-1

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/18/10</u> BORING NO. <u>B-1</u>		
	Bulk	Driven						GROUND ELEVATION <u>1,130± (MSL)</u>	SHEET <u>2</u> OF <u>2</u>	METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>
20			21				SM	ALLUVIUM: (Continued) Yellowish brown, moist, dense, silty SAND with gravel.		
25			40	6.1	102.4			Medium dense. Total Depth = 26.5 feet. No groundwater encountered during drilling. Boring backfilled with soil cuttings on 3/18/10.		
30								<u>Note:</u> Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.		
35										
40										

Ninyo & Moore

BORING LOG

CASTAIC POOL COMPLEX
CASTAIC, CALIFORNIA

PROJECT NO.
207247029

DATE
4/10

FIGURE
A-2

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/18/10</u> BORING NO. <u>B-2</u>	
	Bulk	Driven						GROUND ELEVATION <u>1,131± (MSL)</u>	SHEET <u>1</u> OF <u>2</u>
								METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>	
								DRIVE WEIGHT <u>140 lbs. (Auto. Trip Hammer)</u> DROP <u>30"</u>	
								SAMPLED BY <u>VAM</u> LOGGED BY <u>VAM</u> REVIEWED BY <u>JJB</u>	
								DESCRIPTION/INTERPRETATION	
0							SC	<u>ALLUVIUM:</u> Brown, damp to moist, loose to medium dense, clayey SAND.	
5			8						
10			33	1.7	111.9		GM	Yellowish brown, dry, medium dense, silty GRAVEL with sand.	
15			19				SM	Yellowish brown, damp, medium dense, silty SAND.	
20									



BORING LOG

CASTAIC POOL COMPLEX
CASTAIC, CALIFORNIA

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FIGURE
A-3

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/18/10</u> BORING NO. <u>B-2</u>		
	Bulk	Driven						GROUND ELEVATION <u>1,131± (MSL)</u>	SHEET <u>2</u> OF <u>2</u>	METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>
20			40	2.3	112.0		SM	SAMPLED BY <u>VAM</u> LOGGED BY <u>VAM</u> REVIEWED BY <u>JJB</u>		
								DESCRIPTION/INTERPRETATION		
								<p><u>ALLUVIUM</u>: (Continued) Yellowish brown, damp, medium dense, silty SAND with gravel.</p> <p>Total Depth = 21.5 feet. No groundwater encountered during drilling. Boring backfilled with soil cuttings on 3/18/10.</p> <p><u>Note</u>: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.</p>		
25										
30										
35										
40										

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BORING LOG

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FIGURE
A-4

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION										
	Bulk	Driven						DATE DRILLED	BORING NO.	GROUND ELEVATION	SHEET	OF	METHOD OF DRILLING	DRIVE WEIGHT	DROP	SAMPLED BY	LOGGED BY	REVIEWED BY
0							SC	3/18/10	B-3	1,132± (MSL)	1	2	8" Hollow-Stem Auger (R&C Drilling)	140 lbs. (Auto. Trip Hammer)	30"	VAM	VAM	JJB
0 - 5			9	6.5	103.9		SC	<u>ALLUVIUM:</u> Brown, moist, loose, clayey SAND with scattered silty sand lenses; gravel.										
5 - 10			16				SP-SM	Yellowish brown, damp, medium dense, poorly graded SAND with gravel and silt.										
10 - 15			42	2.5	117.4			Medium dense to dense.										
15 - 20																		

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FIGURE
A-5

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/18/10</u> BORING NO. <u>B-3</u>		
	Bulk	Driven						GROUND ELEVATION <u>1,132± (MSL)</u>	SHEET <u>2</u> OF <u>2</u>	METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>
								DRIVE WEIGHT <u>140 lbs. (Auto. Trip Hammer)</u>	DROP <u>30"</u>	SAMPLED BY <u>VAM</u> LOGGED BY <u>VAM</u> REVIEWED BY <u>JJB</u>
								DESCRIPTION/INTERPRETATION		
20			20			■	SM	<u>ALLUVIUM: (Continued)</u> Yellowish brown, damp, medium dense to dense, silty SAND.		
								Total Depth = 21.5 feet. No groundwater encountered during drilling. Boring backfilled with soil cuttings on 3/18/10. <u>Note:</u> Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.		
25										
30										
35										
40										

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FIGURE
A-6

DEPTH (feet)	SAMPLES Bulk Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED	BORING NO.		
							3/18/10		B-4	
							GROUND ELEVATION	SHEET	OF	
							1,131± (MSL)		1	2
							METHOD OF DRILLING			
							8" Hollow-Stem Auger (R&C Drilling)			
							DRIVE WEIGHT	DROP		
							140 lbs. (Auto. Trip Hammer)	30"		
							SAMPLED BY	LOGGED BY	REVIEWED BY	
							VAM	VAM	JJB	
							DESCRIPTION/INTERPRETATION			
0						SC	<u>ALLUVIUM:</u> Yellowish brown, damp to moist, very loose to loose, clayey SAND with scattered lenses of silty sand.			
5		5	10.5				Moist; loose.			
10		26				SP	Yellowish brown, damp to moist, medium dense, poorly graded SAND with gravel.			
15		36	3.3	112.6			Damp.			
20										

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FIGURE
A-7

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/18/10</u> BORING NO. <u>B-4</u>		
	Bulk	Driven						GROUND ELEVATION <u>1,131± (MSL)</u> SHEET <u>2</u> OF <u>2</u>		METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>
20			18	11.6	107.5		SP-SM	DESCRIPTION/INTERPRETATION		
								<p><u>ALLUVIUM: (Continued)</u> Yellowish brown, moist, medium dense, poorly graded SAND with gravel and silt.</p>		
25			70					<p>Very dense.</p>		
								<p>Total Depth = 26.5 feet. No groundwater encountered during drilling. Boring backfilled with soil cuttings on 3/18/10.</p>		
								<p><u>Note:</u> Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.</p>		
30										
35										
40										

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FIGURE
A-8

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/18/10</u> BORING NO. <u>B-5</u>	
	Bulk	Driven						GROUND ELEVATION <u>1,132± (MSL)</u>	SHEET <u>1</u> OF <u>1</u>
								METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>	
								DRIVE WEIGHT <u>140 lbs. (Auto. Trip Hammer)</u> DROP <u>30"</u>	
								SAMPLED BY <u>VAM</u> LOGGED BY <u>VAM</u> REVIEWED BY <u>JJB</u>	
DESCRIPTION/INTERPRETATION									
0							SC	<u>ALLUVIUM:</u> Brown, damp, very loose, clayey SAND with scattered lenses of silty sand.	
5			5	11.0				Moist, very loose to loose.	
10			19				SP	Yellowish brown, moist, medium dense, poorly graded SAND.	
15			35					Very dense; scattered cobbles.	
20								Total Depth = 16.5 feet. No groundwater encountered during drilling. Boring backfilled with soil cuttings on 3/18/10. <u>Note:</u> Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.	

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FIGURE
A-9

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/18/10</u> BORING NO. <u>B-6</u>	
	Bulk	Driven						GROUND ELEVATION <u>1,132'± (MSL)</u>	SHEET <u>1</u> OF <u>1</u>
								METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>	
								DRIVE WEIGHT <u>140 lbs. (Auto. Trip Hammer)</u> DROP <u>30"</u>	
								SAMPLED BY <u>VAM</u> LOGGED BY <u>VAM</u> REVIEWED BY <u>JJB</u>	
DESCRIPTION/INTERPRETATION									
0							CL	<u>ALLUVIUM:</u> Brown, moist, soft to firm, sandy CLAY with scattered lenses of clayey sand.	
5			6	17.8	96.5			Firm to stiff.	
10			8					Stiff; scattered lenses of poorly graded SAND.	
15			15					Olive brown and brown; very stiff.	
								Total Depth = 16.5 feet. No groundwater encountered during drilling. Boring backfilled with soil cuttings on 3/18/10.	
								<u>Note:</u> Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.	
20									

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FIGURE
A-10

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION	
	Bulk	Driven						DATE DRILLED	BORING NO.
								3/17/10	B-7
								1,133'± (MSL)	SHEET 1 OF 3
								8" Hollow-Stem Auger (R&C Drilling)	
								140 lbs. (Auto. Trip Hammer)	DROP 30"
								VAM	VAM
								VAM	JJB
0							SC	ALLUVIUM: Reddish yellow, damp, loose, clayey SAND with silt.	
5			5	21.3			CL	Brownish yellow, moist, firm to stiff, sandy CLAY.	
10			15	2.2			SP-SM	Yellowish brown, dry to damp, medium dense, poorly graded SAND with silt.	
15			24					Dense.	
20									

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FIGURE
A-11

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/17/10</u> BORING NO. <u>B-7</u>		
	Bulk	Driven						GROUND ELEVATION <u>1,133± (MSL)</u> SHEET <u>2</u> OF <u>3</u>		METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>
20			11	9.3			SM	<u>ALLUVIUM: (Continued)</u> Yellowish brown, moist, medium dense, silty fine to medium SAND.		
25			44					Very dense.		
30			33	2.7			SP-SM	Yellowish brown, damp, dense to very dense, poorly graded SAND with silt and gravel.		
35			49					Very dense.		
40										

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FIGURE
A-12

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/17/10</u> BORING NO. <u>B-7</u>		
	Bulk	Driven						GROUND ELEVATION <u>1,133± (MSL)</u>	SHEET <u>3</u> OF <u>3</u>	METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>
40			39				SP	DRIVE WEIGHT <u>140 lbs. (Auto. Trip Hammer)</u> DROP <u>30"</u> SAMPLED BY <u>VAM</u> LOGGED BY <u>VAM</u> REVIEWED BY <u>JJB</u> DESCRIPTION/INTERPRETATION		
45			50/3"	10.2				<u>ALLUVIUM: (Continued)</u> Yellowish brown, damp, very dense, poorly graded SAND. Groundwater encountered during drilling; saturated. Light brown, saturated, dense.		
50			32	9.7				Total Depth = 51.5 feet. Groundwater encountered during drilling at approximately 45 feet. Boring backfilled with soil cuttings on 3/17/10. <u>Note:</u> Groundwater may rise to a level higher than that measured in borehole due to relatively slow rate of seepage in clay and several other factors as discussed in the report. Please refer to the report for groundwater monitoring recommendations.		
55										
60										

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FIGURE
A-13

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/17/10</u> BORING NO. <u>B-8</u>	
	Bulk	Driven						GROUND ELEVATION <u>1,132± (MSL)</u> SHEET <u>1</u> OF <u>2</u>	
								METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>	
								DRIVE WEIGHT <u>140 lbs. (Auto. Trip Hammer)</u> DROP <u>30"</u>	
								SAMPLED BY <u>VAM</u> LOGGED BY <u>VAM</u> REVIEWED BY <u>JJB</u>	
								DESCRIPTION/INTERPRETATION	
0							CL	<u>ALLUVIUM:</u> Olive brown, moist, stiff, sandy CLAY.	
5			11	11.9	100			Very stiff.	
10			28				SM	Yellowish brown, moist, loose, silty fine to medium SAND.	
15			22	3.6	122.8			Dense.	
								Damp, medium dense.	
							SP	Light brown, dry to damp, medium dense, poorly graded SAND.	
20								Gravel.	



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FIGURE
A-14

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/17/10</u> BORING NO. <u>B-8</u>		
	Bulk	Driven						GROUND ELEVATION <u>1,132± (MSL)</u>	SHEET <u>2</u> OF <u>2</u>	METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>
20			10				CL	ALLUVIUM: (Continued) Mottled olive brown and reddish brown, moist, stiff to very stiff, sandy CLAY.		
25							SP	Reddish brown, dry, very dense, poorly graded SAND.		
30			71					Total Depth = 31.5 feet. No groundwater encountered during drilling. Boring backfilled with soil cuttings on 3/17/10.		
35								Note: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.		
40										

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FIGURE
 A-15

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/17/10</u> BORING NO. <u>B-9</u>		
	Bulk	Driven						GROUND ELEVATION <u>1,132± (MSL)</u>	SHEET <u>1</u> OF <u>4</u>	METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>
								DRIVE WEIGHT <u>140 lbs. (Auto. Trip Hammer)</u>	DROP <u>30"</u>	SAMPLED BY <u>VAM</u> LOGGED BY <u>VAM</u> REVIEWED BY <u>JJB</u>
								DESCRIPTION/INTERPRETATION		
0							SC	<u>ALLUVIUM:</u> Reddish yellow, damp, loose, clayey SAND.		
5			4				CL	Brownish yellow, moist, firm, sandy CLAY.		
10			24	1.4	113.3		SP-SM	Yellowish brown, dry, medium dense, poorly graded SAND with silt.		
15			11				SC	Reddish yellow, moist, medium dense, clayey SAND.		
20								Gravel.		

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FIGURE
A-16

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/17/10</u> BORING NO. <u>B-9</u>		
	Bulk	Driven						GROUND ELEVATION <u>1,132± (MSL)</u> SHEET <u>2</u> OF <u>4</u>		METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>
20			18	6.1	102.0		SP	<u>DESCRIPTION/INTERPRETATION</u>		
25			31					<p><u>ALLUVIUM:</u> (Continued) Olive brown, moist, medium dense, poorly graded SAND.</p> <p>Yellowish brown, dense.</p>		
30			56/6"				SP-SM	Olive brown, moist, medium dense, poorly graded SAND with silt and gravel.		
35			70					Cobble.		
40								Very dense.		

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FIGURE
A-17

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/17/10</u> BORING NO. <u>B-9</u>		
	Bulk	Driven						GROUND ELEVATION <u>1,132'± (MSL)</u> SHEET <u>3</u> OF <u>4</u>		
								METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>		
								DRIVE WEIGHT <u>140 lbs. (Auto. Trip Hammer)</u> DROP <u>30"</u>		
								SAMPLED BY <u>VAM</u> LOGGED BY <u>VAM</u> REVIEWED BY <u>JJB</u>		
								DESCRIPTION/INTERPRETATION		
40			41				SW	<u>ALLUVIUM</u> : (Continued) Yellowish brown, wet, very dense, well graded SAND. Groundwater encountered on 3/18/10. Groundwater encountered during drilling. Saturated; medium dense.		
45			11							
50			18							
55			32				SP	Yellowish brown, saturated, dense, poorly graded SAND.		
60										

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FIGURE
 A-18

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/17/10</u> BORING NO. <u>B-9</u>		
	Bulk	Driven						GROUND ELEVATION <u>1,132± (MSL)</u> SHEET <u>4</u> OF <u>4</u>		METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>
60			35				SP	DESCRIPTION/INTERPRETATION		
65			34					<u>ALLUVIUM: (Continued)</u> Yellowish brown, saturated, very dense, poorly graded SAND; gravel.		
70			35					Total Depth = 71.5 feet. Groundwater encountered during drilling at approximately 45 feet. Groundwater was measured at a depth of approximately 43.3 feet in borehole approximately 19 hours after completion of drill. Boring backfilled with soil cuttings on 3/18/10.		
75								<u>Note:</u> Groundwater may rise to a level higher than that measured in borehole due to relatively slow rate of seepage in clay and several other factors as discussed in the report. Please refer to the report for groundwater monitoring recommendations.		
80										

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FIGURE
A-19

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/17/10</u> BORING NO. <u>B-10</u>		
	Bulk	Driven						GROUND ELEVATION <u>1,131± (MSL)</u>	SHEET <u>1</u> OF <u>2</u>	METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>
								DRIVE WEIGHT <u>140 lbs. (Auto. Trip Hammer)</u>	DROP <u>30"</u>	SAMPLED BY <u>VAM</u> LOGGED BY <u>VAM</u> REVIEWED BY <u>JJB</u>
								DESCRIPTION/INTERPRETATION		
0						[Cross-hatched symbol]	SC	<u>ALLUVIUM:</u> Reddish yellow, moist, loose, clayey fine SAND.		
5			7			[Diagonal lines symbol]	CL	Olive brown and reddish yellow, moist, stiff, sandy CLAY.		
10			24			[Dotted symbol]	SM	Yellowish brown, damp, medium dense, silty fine to medium SAND.		
15			16			[Dotted symbol]		Gravel.		
						[Dotted symbol]		Medium dense, scattered poorly graded sand lenses.		
20						[Cross-hatched symbol]	SC	Olive brown, moist, medium dense, clayey fine SAND.		

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FIGURE
A-20

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/17/10</u> BORING NO. <u>B-10</u>		
	Bulk	Driven						GROUND ELEVATION <u>1,131± (MSL)</u>	SHEET <u>2</u> OF <u>2</u>	METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>
								DRIVE WEIGHT <u>140 lbs. (Auto. Trip Hammer)</u>	DROP <u>30"</u>	SAMPLED BY <u>VAM</u> LOGGED BY <u>VAM</u> REVIEWED BY <u>JJB</u>
								DESCRIPTION/INTERPRETATION		
20			14				SM	ALLUVIUM: (Continued) Olive brown, moist, loose to medium dense, silty fine SAND.		
							CL	Mottled yellowish brown and olive brown, moist, very stiff, sandy CLAY with scattered lenses of clayey and silty sand; thinly laminated.		
25										
							SM	Yellowish brown, dry, very dense, silty fine to medium SAND; gravel.		
30			63							
								Total Depth = 31.5 feet. No groundwater encountered during drilling. Boring backfilled with soil cuttings on 3/17/10.		
								<u>Note:</u> Groundwater, through not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.		
35										
40										

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FIGURE
A-21

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED	BORING NO.	
	Bulk	Driven						3/17/10	B-11	
								GROUND ELEVATION	SHEET	OF
								METHOD OF DRILLING		
								DRIVE WEIGHT	DROP	
								SAMPLED BY	LOGGED BY	REVIEWED BY
								DESCRIPTION/INTERPRETATION		
0							SC	<u>FILL:</u> Yellowish brown, moist, medium dense, clayey SAND.		
			20					Dark olive brown.		
5								Total Depth = 5 feet. No groundwater encountered during drilling. Boring backfilled with soil cuttings on 3/17/10.		
								<u>Note:</u> Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors was discussed in the report.		
10										
15										
20										

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FIGURE
A-22

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/18/10</u> BORING NO. <u>B-12</u>		
	Bulk	Driven						GROUND ELEVATION <u>1,131± (MSL)</u>	SHEET <u>1</u> OF <u>1</u>	METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>
0								DRIVE WEIGHT <u>140 lbs. (Auto. Trip Hammer)</u>	DROP <u>30"</u>	SAMPLED BY <u>VAM</u> LOGGED BY <u>VAM</u> REVIEWED BY <u>JJB</u>
5			5				SC	DESCRIPTION/INTERPRETATION		
								<p>FILL: Dark brown, moist, very loose to loose, clayey fine SAND.</p> <p>Layer of grayish white, moist, loose, silty SAND.</p> <p>Total Depth = 5 feet. No groundwater encountered during drilling. Boring backfilled with soil cuttings on 3/18/10.</p> <p><u>Note:</u> Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.</p>		
20										



BORING LOG

CASTAIC POOL COMPLEX
CASTAIC, CALIFORNIA

PROJECT NO.
207247029

DATE
4/10

FIGURE
A-23

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/18/10</u> BORING NO. <u>B-13</u>	
	Bulk	Driven						GROUND ELEVATION <u>1,136± (MSL)</u>	SHEET <u>1</u> OF <u>1</u>
								METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>	
								DRIVE WEIGHT <u>140 lbs. (Auto. Trip Hammer)</u> DROP <u>30"</u>	
								SAMPLED BY <u>VAM</u> LOGGED BY <u>VAM</u> REVIEWED BY <u>JJB</u>	
								DESCRIPTION/INTERPRETATION	
0						■	GP-GM	<u>ASPHALT CONCRETE:</u> Approximately 5 inches thick.	
						■	SM	<u>AGGREGATE BASE:</u> Brown, damp to moist, medium dense, sandy GRAVEL with silt; approximately 5 inches thick.	
								<u>FILL:</u> Yellowish brown, moist, medium dense, silty SAND with gravel. Total Depth = 1.6 feet.	
								No groundwater encountered during drilling. Boring backfilled with soil cuttings and capped with concrete on 3/18/10.	
5								<u>Note:</u> Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.	
10									
15									
20									



BORING LOG

CASTAIC POOL COMPLEX
 CASTAIC, CALIFORNIA

PROJECT NO.
 207247029

DATE
 4/10

FIGURE
 A-24

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/17/10</u> BORING NO. <u>B-14</u> GROUND ELEVATION <u>1,128± (MSL)</u> SHEET <u>1</u> OF <u>1</u> METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u> DRIVE WEIGHT <u>140 lbs. (Auto. Trip Hammer)</u> DROP <u>30"</u> SAMPLED BY <u>VAM</u> LOGGED BY <u>VAM</u> REVIEWED BY <u>JJB</u>		
	Bulk	Driven						DESCRIPTION/INTERPRETATION		
0							SC	<u>FILL:</u> Brown, damp to moist, loose, clayey SAND.		
							SM	<u>ALLUVIUM:</u> Yellowish brown, damp, loose, silty fine to medium SAND with occasional gravel and cobbles.		
5								Total Depth = 5 feet. No groundwater encountered during drilling. Boring backfilled with gravel and soil cuttings on 3/18/10. <u>Note:</u> Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.		
10										
15										
20										

Ninyo & Moore

BORING LOG

CASTAIC POOL COMPLEX
CASTAIC, CALIFORNIA

PROJECT NO.
207247029

DATE
4/10

FIGURE
A-25

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/17/10</u> BORING NO. <u>B-15</u>		
	Bulk	Driven						GROUND ELEVATION <u>1,127± (MSL)</u>	SHEET <u>1</u> OF <u>1</u>	METHOD OF DRILLING <u>8" Hollow-Stem Auger (R&C Drilling)</u>
								DRIVE WEIGHT <u>140 lbs. (Auto. Trip Hammer)</u>	DROP <u>30"</u>	SAMPLED BY <u>VAM</u> LOGGED BY <u>VAM</u> REVIEWED BY <u>JJB</u>
								DESCRIPTION/INTERPRETATION		
0							SC	<u>FILL:</u> Brown, damp to moist, loose, clayey SAND.		
							SM	<u>ALLUVIUM:</u> Yellowish brown, damp, loose, silty SAND; occasional cobbles.		
5								Total Depth = 5 feet. No groundwater encountered during drilling. Boring backfilled with gravel and soil cuttings on 3/18/10.		
								<u>Note:</u> Groundwater, though not encountered at the tie of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.		
10										
15										
20										

Ninyo & Moore

BORING LOG

CASTAIC POOL COMPLEX
CASTAIC, CALIFORNIA

PROJECT NO.
207247029

DATE
4/10

FIGURE
A-26

APPENDIX B

LABORATORY TESTING

Classification

Soils were visually and texturally classified in accordance with the Unified Soil Classification System (USCS) in general accordance with ASTM D 2488. Soil classifications are indicated on the logs of the exploratory borings in Appendix A.

In-Place Moisture and Density Tests

The moisture content and dry density of relatively undisturbed samples obtained from the exploratory borings were evaluated in general accordance with ASTM D 2937. The test results are presented on the logs of the exploratory borings in Appendix A.

Gradation Analysis

Gradation analysis testing was performed on a selected representative soil sample in general accordance with ASTM D 422. The grain-size distribution curve is shown on Figure B-1. This test results were utilized in evaluating the soil classifications in accordance with the USCS.

200 Wash Tests

An evaluation of the percentage of particles finer than the No. 200 sieve in selected soil samples was performed in general accordance with ASTM D 1140. The results of the tests are presented on Figures B-2 and B-3.

Consolidation Test

Consolidation testing was performed on a selected relatively undisturbed soil sample in general accordance with ASTM D 2435. The sample was inundated during testing to represent adverse field conditions. The percent of consolidation for each load cycle was recorded as a ratio of the amount of vertical compression to the original height of the sample. The results of the testing is summarized on Figure B-4.

Direct Shear Tests

Direct shear tests were performed on samples remolded to approximately 90 percent of the Proctor density and on relatively undisturbed samples in general accordance with ASTM D 3080 to evaluate the shear strength characteristics of the selected materials. The samples were inundated during shearing to represent adverse field conditions. The results are shown on Figure B-5 and B-6.

Expansion Index Test

Expansion index of a selected sample was evaluated in general accordance with (ASTM D 4829). The specimen was molded under a specified compactive energy at approximately 50 percent saturation (plus or minus 1 percent). The prepared 1-inch-thick by 4-inch-diameter specimen was loaded with a surcharge of 144 pounds per square foot and was inundated with tap water. Readings of volumetric swell were made for a period of 24 hours. The results of this test is presented on Figure B-7.

Proctor Density Test

The maximum dry density and optimum moisture content of a selected representative soil sample was evaluated using the Modified Proctor method in general accordance with ASTM D 1557. The results of this test are summarized on Figure B-8.

Soil Corrosivity Tests

Soil pH, and resistivity tests were performed on representative soil samples in general accordance with California Test (CT) 643. The soluble sulfate and chloride content of the selected samples were evaluated in general accordance with CT 417 and CT 422, respectively. The test results are presented on Figure B-9.

R-Value

The resistance value, or R-value, for a representative soil sample was evaluated in general accordance with California Test (CT) 301. Sample was prepared and evaluated for exudation pressure and expansion pressure. The equilibrium R-value is reported as the lesser or more conservative of the two calculated results. The test result is shown on Figure B-10.

SAMPLE LOCATION	SAMPLE DEPTH (FT)	DESCRIPTION	PERCENT PASSING NO. 4	PERCENT PASSING NO. 200	USCS (TOTAL SAMPLE)
B-1	15.0-16.5	Poorly graded SAND with silt and gravel	78	6	SP-SM
B-2	4.0-9.0	Clayey SAND	94	46	SC
B-3	10.0-11.5	Poorly graded SAND with silt and gravel	64	7	SP-SM
B-4	5.0-6.5	Clayey SAND	97	23	SC
B-5	5.0-6.5	Clayey SAND	98	23	SC
B-7	5.0-6.5	Sandy CLAY	98	56	CL
B-7	10.0-11.5	Poorly graded SAND with silt	93	5	SP-SM
B-7	20.0-21.5	Silty SAND	100	18	SM
B-7	30.0-31.5	Poorly graded SAND with silt and gravel	67	6	SP-SM

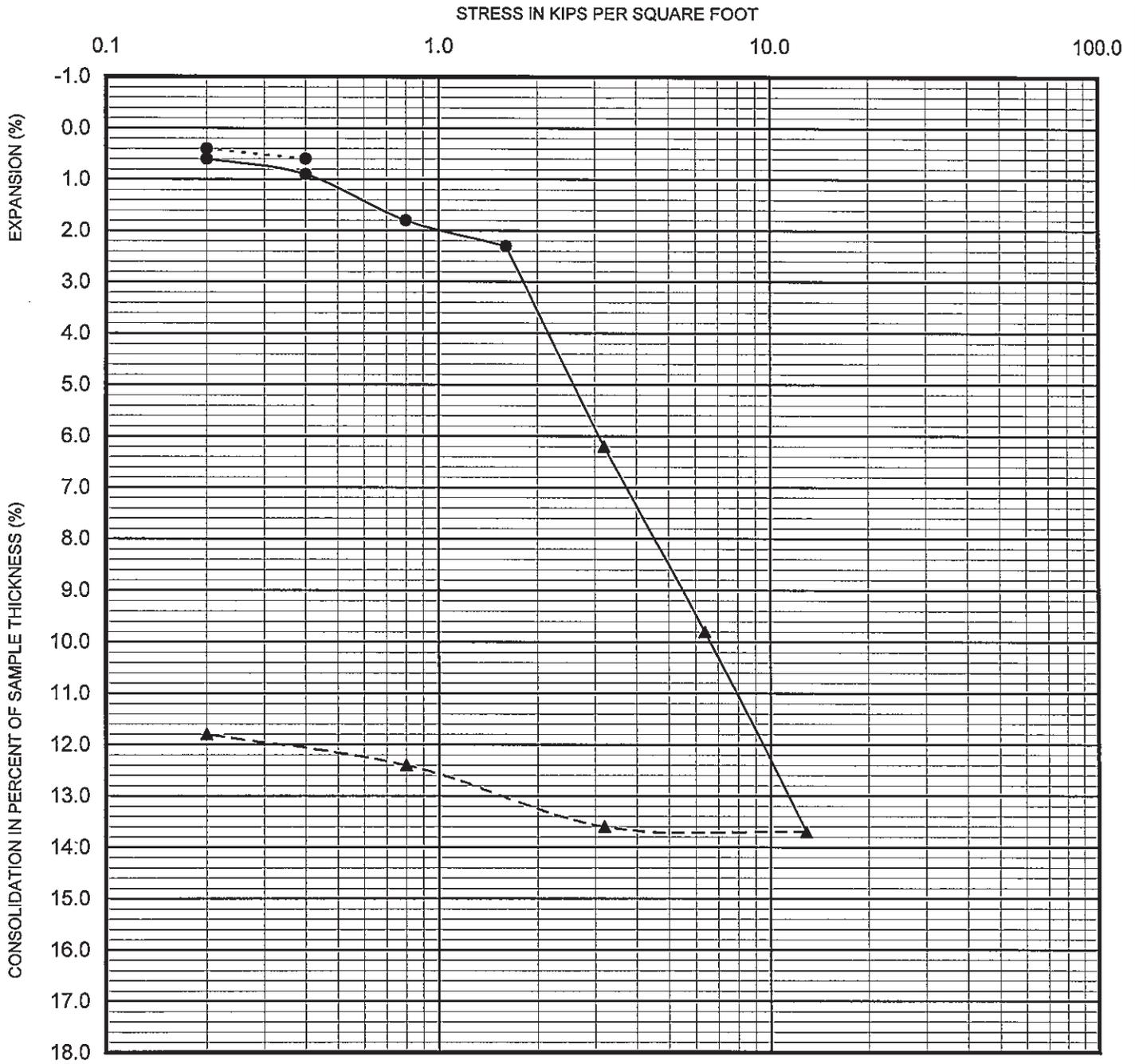
PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 1140

Ningo & Moore		NO. 200 SIEVE ANALYSIS	FIGURE
PROJECT NO.	DATE	CASTAIC POOL COMPLEX CASTAIC, CALIFORNIA	B-2
207247029	4/10		

SAMPLE LOCATION	SAMPLE DEPTH (FT)	DESCRIPTION	PERCENT PASSING NO. 4	PERCENT PASSING NO. 200	USCS (TOTAL SAMPLE)
B-7	45.0-46.5	Poorly Graded SAND	89	4	SP
B-7	50.0-51.5	Poorly Graded SAND	69	4	SP
B-9	25.0-26.5	Poorly Graded SAND	87	4	SP
B-9	35.0-36.5	Poorly graded SAND with silt and gravel	64	8	SP-SM
B-9	55.0-56.5	Poorly Graded SAND	99	4	SP
B-9	65.0-66.5	Poorly Graded SAND	100	3	SP
B-11	0.0-4.0	Clayey SAND	92	33	SC
B-14	4.0-5.0	Silty SAND with gravel	82	14	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 1140

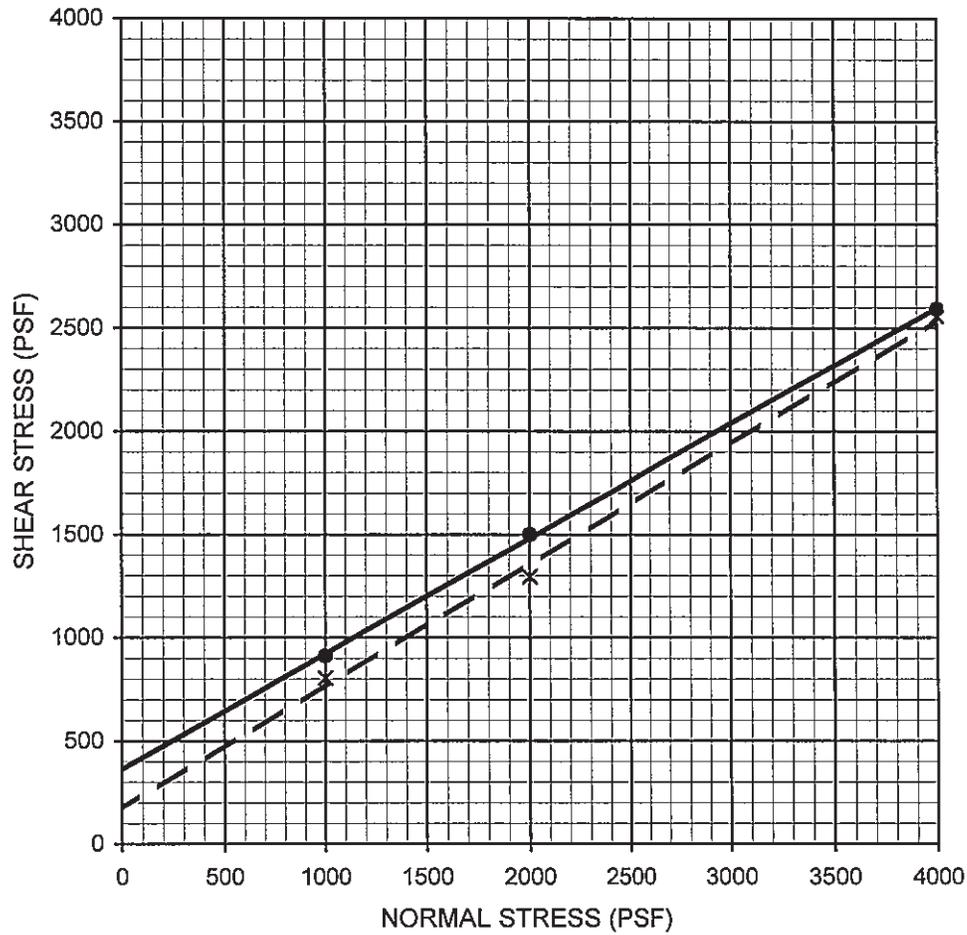
Ninyo & Moore		NO. 200 SIEVE ANALYSIS	FIGURE
PROJECT NO.	DATE	CASTAIC POOL COMPLEX CASTAIC, CALIFORNIA	B-3
207247029	4/10		



---●---	Seating Cycle	Sample Location	B-3
—●—	Loading Prior to Inundation	Depth (ft.)	15.0-16.5
—▲—	Loading After Inundation	Soil Type	SP-SM
---▲---	Rebound Cycle		

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 2435

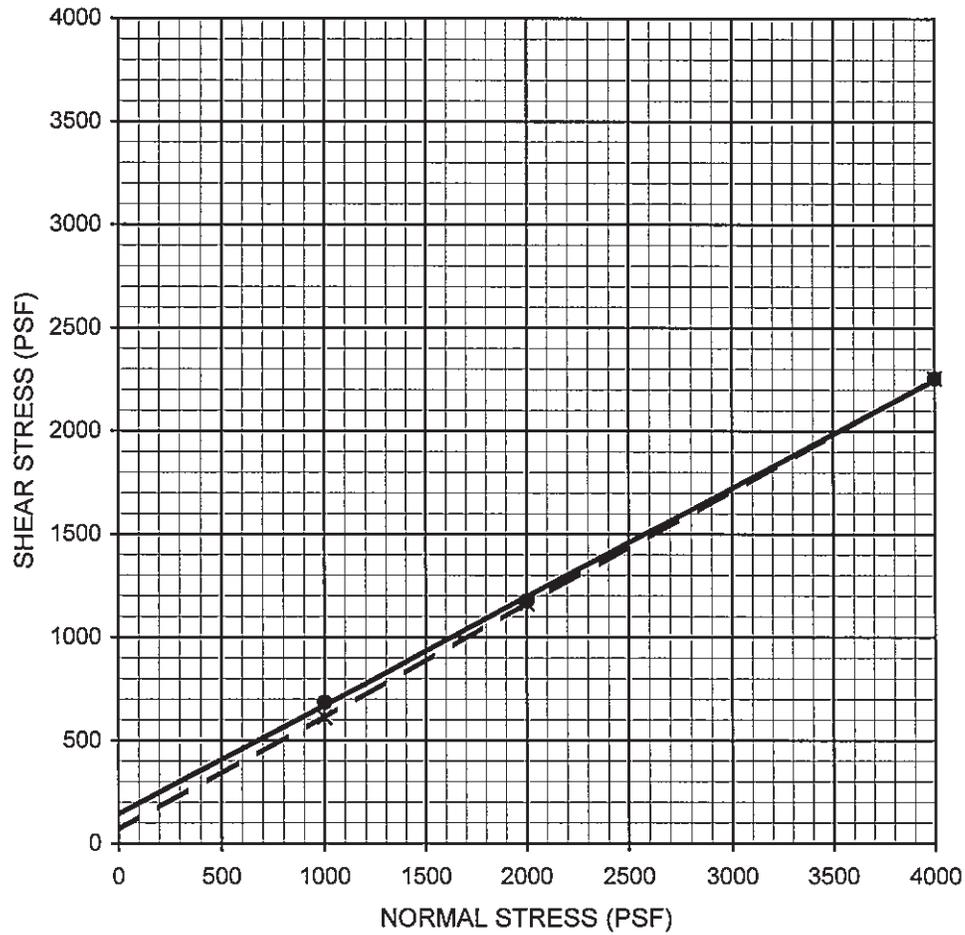
Ninyo & Moore		CONSOLIDATION TEST RESULTS	FIGURE
PROJECT NO.	DATE	CASTAIC POOL COMPLEX CASTAIC, CALIFORNIA	B-4
207247029	4/10		



Description	Symbol	Sample Location	Depth (ft)	Shear Strength	Cohesion, c (psf)	Friction Angle, ϕ (degrees)	Soil Type
Clayey SAND	—●—	B-1	0.0-4.0	Peak	365	29	SC
Clayey SAND	- - X - -	B-1	0.0-4.0	Ultimate	175	31	SC

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 3080 ON A SAMPLE REMOLDED TO 90 PERCENT RELATIVE COMPACTION

Ninyo & Moore		DIRECT SHEAR TEST RESULTS	FIGURE B-5
PROJECT NO. 207247029	DATE 4/10		



Description	Symbol	Sample Location	Depth (ft)	Shear Strength	Cohesion, c (psf)	Friction Angle, ϕ (degrees)	Soil Type
Sandy CLAY	—●—	B-8	5.0-6.5	Peak	145	28	CL
Sandy CLAY	- - X - -	B-8	5.0-6.5	Ultimate	65	29	CL

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 3080.

Ninyo & Moore		DIRECT SHEAR TEST RESULTS	FIGURE
PROJECT NO.	DATE	CASTAIC POOL COMPLEX CASTAIC, CALIFORNIA	B-6
207247029	4/10		

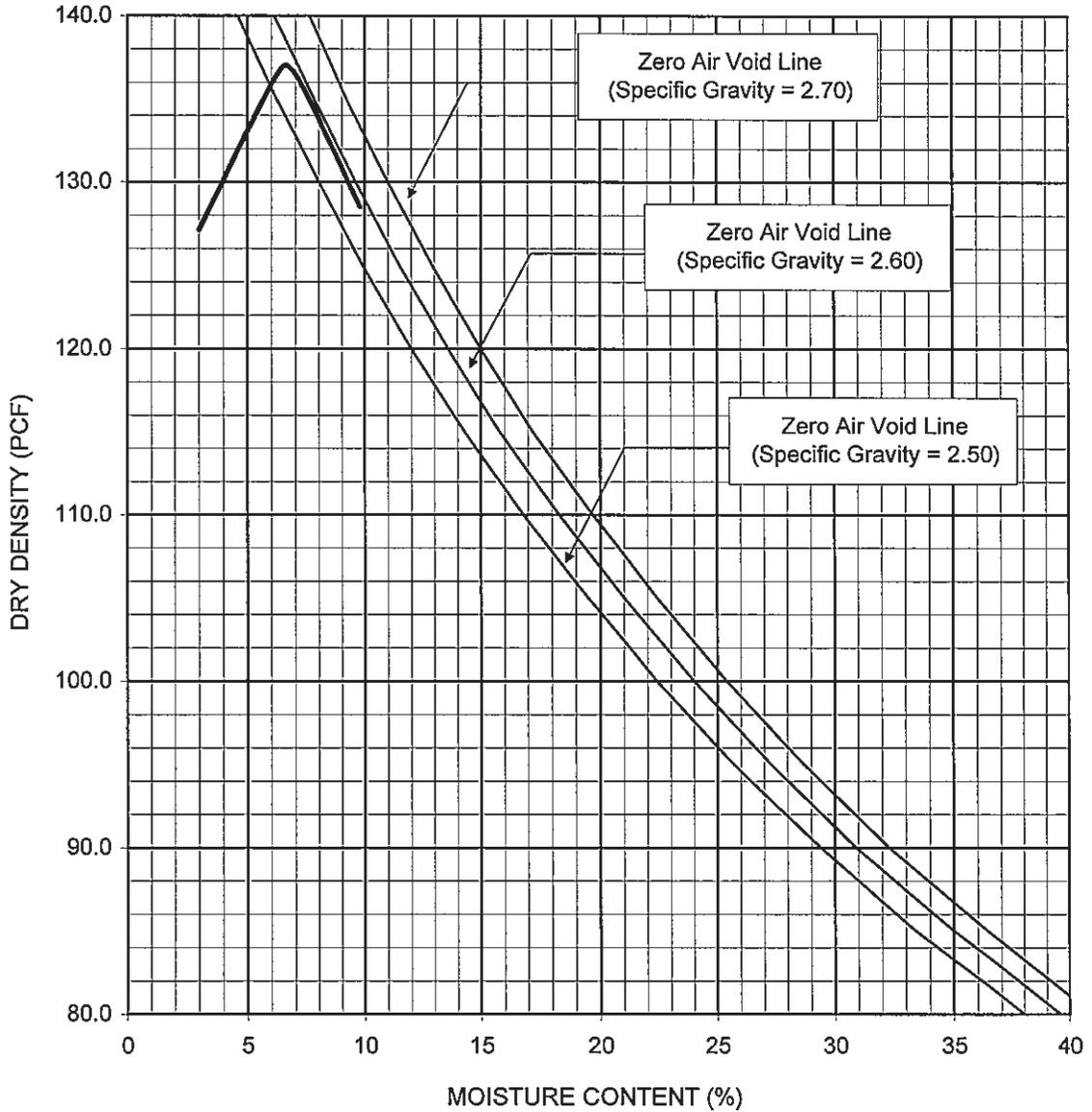
SAMPLE LOCATION	SAMPLE DEPTH (FT)	INITIAL MOISTURE (%)	COMPACTED DRY DENSITY (PCF)	FINAL MOISTURE (%)	VOLUMETRIC SWELL (IN)	EXPANSION INDEX	POTENTIAL EXPANSION
B-2	4.0-9.0	9.5	110.8	27.4	0.058	58	Medium

PERFORMED IN GENERAL ACCORDANCE WITH

UBC STANDARD 18-2

ASTM D 4829

<i>Ninyo & Moore</i>		EXPANSION INDEX TEST RESULTS	FIGURE
PROJECT NO.	DATE	CASTAIC POOL COMPLEX CASTAIC, CALIFORNIA	B-7
207247029	4/10		



Sample Location	Depth (ft)	Soil Description	Maximum Dry Density (pcf)	Optimum Moisture Content (%)
B-1	0.0-4.0	Clayey SAND	137.0	6.5
Dry Density and Moisture Content Values Corrected for Oversize (ASTM D 4718-87)				

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 1557 ASTM D 698 METHOD A B C

		PROCTOR DENSITY TEST RESULTS CASTAIC POOL COMPLEX CASTAIC, CALIFORNIA		FIGURE B-8
207247029		4/10		

SAMPLE LOCATION	SAMPLE DEPTH (FT)	pH ¹	RESISTIVITY ¹ (Ohm-cm)	SULFATE CONTENT ²		CHLORIDE CONTENT ³ (ppm)
				(ppm)	(%)	
B-1	0.0-4.0	7.2	10,050	10	0.001	65
B-2	4.0-9.0	7.2	2,815	10	0.001	65

¹ PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 643

² PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 417

³ PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 422

<i>Ninyo & Moore</i>		CORROSIVITY TEST RESULTS	FIGURE
PROJECT NO.	DATE	CASTAIC POOL COMPLEX CASTAIC, CALIFORNIA	B-9
207247029	4/10		

SAMPLE LOCATION	SAMPLE DEPTH (FT)	SOIL TYPE	R-VALUE
B-11	0.0-4.0	Clayey SAND	38

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 2844/CT 301

<i>Ninyo & Moore</i>		R-VALUE TEST RESULTS	FIGURE
PROJECT NO.	DATE		B-10
207247029	4/10	CASTAIC POOL COMPLEX CASTAIC, CALIFORNIA	

APPENDIX C
LIQUEFACTION AND DYNAMIC SETTLEMENT ANALYSES

APPENDIX C
LIQUEFACTION AND DYNAMIC SETTLEMENT ANALYSES

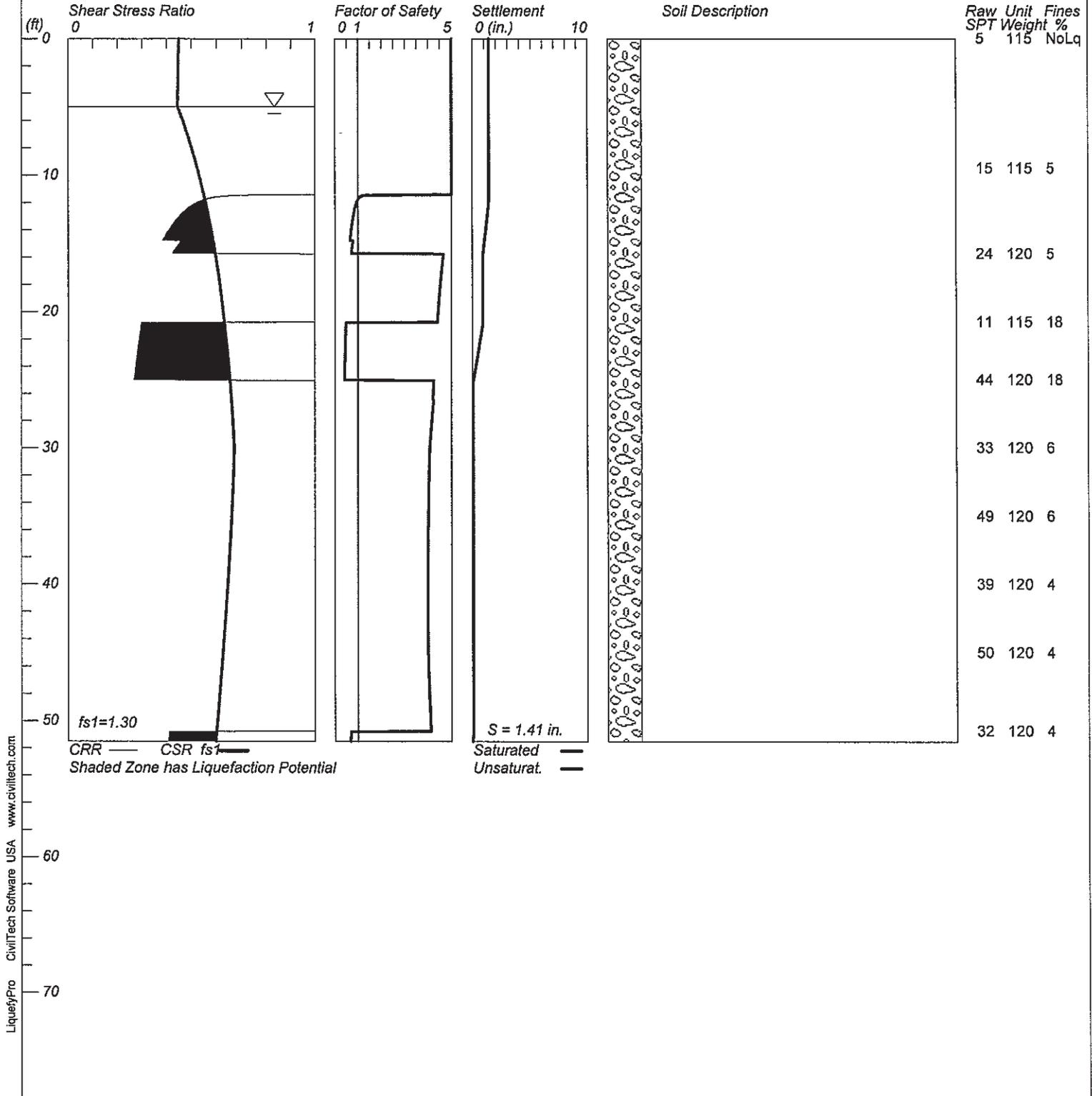
LIQUEFACTION ANALYSIS

Castaic Sports Complex

Hole No.=B-7 Water Depth=5 ft Surface Elev.=1,133

Ground Improvement of Fill=5 ft

Magnitude=6.6
Acceleration=0.53g



B-7.cal

 LIQUEFACTION ANALYSIS CALCULATION DETAILS
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Complex\B-7.liq Input File Name: \\GC-IRV\Documents\$dchu\My Documents\Design\COLA\207247029, Castaic Pool
 Title: Castaic Sports Complex
 Subtitle: 207247029

Input Data:

Surface Elev.=1,133
 Hole No.=B-7
 Depth of Hole=51.50 ft
 Water Table during Earthquake= 5.00 ft
 Water Table during In-Situ Testing= 45.00 ft
 Max. Acceleration=0.53 g
 Earthquake Magnitude=6.60

1. SPT or BPT Calculation.
 2. Settlement Analysis Method: Tokimatsu/Seed
 3. Fines Correction for Liquefaction: Idriss/Seed
 4. Fine Correction for Settlement: During Liquefaction*
 5. Settlement Calculation in: Liq. zone only
 6. Hammer Energy Ratio, Ce = 1.3
 7. Borehole Diameter, cb= 1
 8. Sampling Method, Cs= 1
 9. User request factor of safety (apply to CSR) , User= 1.3
 Plot one CSR curve (fs1=User)
 10. Use Curve Smoothing: No
- * Recommended Options

Fill on Ground Surface= 5 ft Fill Unit Weight= 125 pcf
 Factor of soil strength (SPT or CPT) change due to fill= 1
 Depth of this report is based on original ground surface, not based on fill
 1 atm (atmosphere) = 1 tsf (ton/ft2)

In-Situ Test Data:

Depth ft	SPT	Gamma pcf	Fines %
0.00	5.00	115.00	NoLiq
9.50	15.00	115.00	5.00
15.75	24.00	120.00	5.00
20.75	11.00	115.00	18.00
25.00	44.00	120.00	18.00
30.00	33.00	120.00	6.00
35.00	49.00	120.00	6.00
40.00	39.00	120.00	4.00
45.00	50.00	120.00	4.00
50.75	32.00	120.00	4.00

Output Results:

Calculation segment, dz=0.050 ft
 User defined Print Interval, dp=5.00 ft

CSR Calculation:

Depth ft	gamma pcf	sigma atm	gamma' pcf	sigma' atm	rd	CSR	x fs1	=CSRfs
0.00	115.00	0.313	115.00	0.313	1.00	0.34	1.30	0.45
5.00	115.00	0.600	52.60	0.600	0.99	0.34	1.30	0.44
10.00	115.00	0.888	52.60	0.732	0.98	0.41	1.30	0.53
15.00	115.00	1.175	52.60	0.863	0.97	0.45	1.30	0.59
20.00	120.00	1.473	57.60	1.005	0.95	0.48	1.30	0.63
25.00	115.00	1.763	52.60	1.139	0.94	0.50	1.30	0.65
30.00	120.00	2.063	57.60	1.283	0.93	0.52	1.30	0.67
35.00	120.00	2.363	57.60	1.427	0.89	0.51	1.30	0.66
40.00	120.00	2.663	57.60	1.571	0.85	0.50	1.30	0.64
45.00	120.00	2.963	57.60	1.715	0.81	0.48	1.30	0.63
50.00	120.00	3.263	57.60	1.859	0.77	0.46	1.30	0.60

CSR is based on water table at 5.00 during earthquake
 sigma and sigma' are based on fill on ground surface during earthquake

CRR Calculation from SPT or BPT data:										
Depth ft	SPT	Cebs	Cr	sigma' atm	Cn	(N1)60	Fines %	d(N1)60	(N1)60f	CRR7.5
0.00	10.00	1.30	0.75	0.000	1.70	16.58	NoLiq	8.32	24.89	0.28
5.00	10.00	1.30	0.75	0.288	1.70	16.58	NoLiq	8.32	24.89	0.28
10.00	23.15	1.30	0.85	0.575	1.32	33.74	5.00	0.00	33.74	2.00
15.00	20.43	1.30	0.95	0.863	1.08	27.17	5.00	0.00	27.17	0.32
20.00	30.46	1.30	0.95	1.161	0.93	34.92	5.00	0.00	34.92	2.00
25.00	13.37	1.30	0.95	1.450	0.83	13.71	18.00	4.14	17.86	0.19
30.00	51.86	1.30	1.00	1.750	0.76	50.96	18.00	6.62	57.58	2.00
35.00	38.03	1.30	1.00	2.050	0.70	34.53	6.00	0.19	34.72	2.00
40.00	55.52	1.30	1.00	2.350	0.65	47.08	6.00	0.25	47.33	2.00
45.00	43.60	1.30	1.00	2.650	0.61	34.82	4.00	0.00	34.82	2.00
50.00	55.59	1.30	1.00	2.796	0.60	43.22	4.00	0.00	43.22	2.00

CRR is based on water table at 45.00 during In-situ Testing
SPT or CPT are increased due to increased overburden pressure

Factor of Safety, - Earthquake Magnitude= 6.60:

Depth ft	sigC' atm	CRR7.5	x Ksig	=CRRv	x MSF	=CRRm	CSRfs	F.S.=CRRm/CSRfs
0.00	0.00	0.28	1.00	0.28	1.39	2.00	0.45	5.00 ^
5.00	0.19	0.28	1.00	0.28	1.39	2.00	0.44	5.00 ^
10.00	0.37	2.00	1.00	2.00	1.39	2.77	0.53	5.00
15.00	0.56	0.32	1.00	0.32	1.39	0.45	0.59	0.76 *
20.00	0.75	2.00	1.00	2.00	1.39	2.77	0.63	4.43
25.00	0.94	0.19	1.00	0.19	1.39	0.27	0.65	0.41 *
30.00	1.14	2.00	0.98	1.97	1.39	2.73	0.67	4.08
35.00	1.33	2.00	0.96	1.91	1.39	2.65	0.66	4.02
40.00	1.53	2.00	0.93	1.86	1.39	2.58	0.64	4.00
45.00	1.72	2.00	0.90	1.81	1.39	2.51	0.63	4.01
50.00	1.82	2.00	0.89	1.79	1.39	2.48	0.60	4.11

* F.S.<1: Liquefaction Potential Zone. (If above water table: F.S.=5)
^ No-liquefiable Soils or above water Table.
(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

CPT convert to SPT for Settlement Analysis:

Fines Correction for Settlement Analysis:							
Depth ft	Ic	qc/N60	qc1 atm	(N1)60	Fines %	d(N1)60	(N1)60s
0.00	-	-	-	24.89	NoLiq	0.00	24.89
5.00	-	-	-	24.89	NoLiq	0.00	24.89
10.00	-	-	-	33.74	5.00	0.00	33.74
15.00	-	-	-	27.17	5.00	0.00	27.17
20.00	-	-	-	34.92	5.00	0.00	34.92
25.00	-	-	-	17.86	18.00	0.00	17.86
30.00	-	-	-	57.58	18.00	0.00	57.58
35.00	-	-	-	34.72	6.00	0.00	34.72
40.00	-	-	-	47.33	6.00	0.00	47.33
45.00	-	-	-	34.82	4.00	0.00	34.82
50.00	-	-	-	43.22	4.00	0.00	43.22

(N1)60s has been fines corrected in liquefaction analysis, therefore d(N1)60=0.
Fines=NoLiq means the soils are not liquefiable.

Settlement of saturated Sands:

Settlement Analysis Method: Tokimatsu/Seed

Depth ft	CSRsf	/ MSF*	=CSRm	F.S.	Fines %	(N1)60s	Dr %	ec %	dsz in.	dsp in.	s in.
51.45	0.60	1.00	0.60	0.68	4.00	27.42	84.50	1.039	6.2E-3	0.006	0.006
50.00	0.60	1.00	0.60	4.11	4.00	43.22	100.00	0.000	0.0E0	0.081	0.087
45.00	0.63	1.00	0.63	4.01	4.00	34.82	100.00	0.158	0.0E0	0.000	0.087
40.00	0.64	1.00	0.64	4.00	6.00	47.33	100.00	0.000	0.0E0	0.000	0.087
35.00	0.66	1.00	0.66	4.02	6.00	34.72	100.00	0.161	0.0E0	0.000	0.087
30.00	0.67	1.00	0.67	4.08	18.00	57.58	100.00	0.000	0.0E0	0.000	0.087
25.00	0.65	1.00	0.65	0.41	18.00	17.86	66.65	1.682	1.0E-2	0.010	0.097
20.00	0.63	1.00	0.63	4.43	5.00	34.92	100.00	0.154	0.0E0	0.808	0.905
15.00	0.59	1.00	0.59	0.76	5.00	27.17	84.00	1.054	6.3E-3	0.097	1.003
10.00	0.53	1.00	0.53	5.00	5.00	33.74	99.19	0.192	0.0E0	0.408	1.411
5.00	0.44	1.00	0.44	5.00	NoLiq	24.89	79.51	1.178	0.0E0	0.000	1.411

Settlement of Saturated Sands=1.411 in.
 qc1 and (N1)60 is after fines correction in liquefaction analysis
 dsz is per each segment, dz=0.05 ft
 dsp is per each print interval, dp=5.00 ft
 S is cumulated settlement at this depth

Settlement of Unsaturated Sands:

Settlement of Unsaturated Sands=0 due to Option 5, Calculation settlement only in liquefied zone.

S	Depth	sigma'	sigC'	(N1)60s	CSRsf	Gmax	g*Ge/Gm	g_eff	ec7.5	Cec	ec	dsz	dsp
in.	ft	atm	atm			atm			%		%	in.	in.
0.000	4.95	0.28	0.19	24.89	0.44	561.04	2.2E-4	0.0492	0.0364	0.81	0.0293	0.00E0	
0.000	0.000												
0.000	0.00	0.00	0.00	24.89	0.45	3.33	1.3E-6	0.0010	0.0008	0.81	0.0006	0.00E0	
	Settlement of Unsaturated Sands												

Settlement of Unsaturated Sands=0.000 in.
 dsz is per each segment, dz=0.05 ft
 dsp is per each print interval, dp=5.00 ft
 S is cumulated settlement at this depth

Total Settlement of Saturated and Unsaturated Sands=1.411 in.
 Differential Settlement=0.705 to 0.931 in.

Units: Depth = ft, Stress or Pressure = atm (tsf), Unit Weight = pcf, Settlement = in.

1 atm (atmosphere) = 1 tsf (ton/ft2)

- SPT Field data from Standard Penetration Test (SPT)
- BPT Field data from Becker Penetration Test (BPT)
- qc Field data from Cone Penetration Test (CPT) [atm (tsf)]
- fs Friction from CPT testing [atm (tsf)]
- gamma Total unit weight of soil
- gamma' Effective unit weight of soil
- Fines Fines content [%]
- D50 Mean grain size
- Dr Relative Density
- sigma Total vertical stress [atm (tsf)]
- sigma' Effective vertical stress [atm (tsf)]
- sigC' Effective confining pressure [atm (tsf)]
- rd Stress reduction coefficient
- CRRV CRR after overburden stress correction, CRRV=CRR7.5 * Ksig
- CRR7.5 Cyclic resistance ratio (M=7.5)
- Ksig Overburden stress correction factor for CRR7.5
- CRRM After magnitude scaling correction CRRM=CRRV * MSF
- MSF Magnitude scaling factor from M=7.5 to user input M
- CSR Cyclic stress ratio induced by earthquake
- CSRfs CSR=CSR*fs1 (Default fs1=1)
- fs1 First CSR curve in graphic defined in #9 of Advanced page
- fs2 2nd CSR curve in graphic defined in #9 of Advanced page
- F.S. Calculated factor of safety against liquefaction F.S.=CRRM/CSRfs
- Cebs Energy Ratio, Borehole Dia., and Sampling Method Corrections
- Cr Rod Length Corrections
- Cn Overburden Pressure Correction
- (N1)60 SPT after corrections, (N1)60=SPT * Cr * Cn * Cebs
- d(N1)60 Fines correction of SPT
- (N1)60f (N1)60 after fines corrections, (N1)60f=(N1)60 + d(N1)60
- Cq Overburden stress correction factor
- qc1 CPT after Overburden stress correction
- dqc1 Fines correction of CPT
- qc1f CPT after Fines and Overburden correction, qc1f=qc1 + dqc1
- qc1n CPT after normalization in Robertson's method
- Kc Fine correction factor in Robertson's Method
- qc1f CPT after Fines correction in Robertson's Method
- Ic Soil type index in Suzuki's and Robertson's Methods
- (N1)60s (N1)60 after settlement fines corrections
- CSRm After magnitude scaling correction for Settlement calculation CSRm=CSRsf / MSF*
- CSRfs Cyclic stress ratio induced by earthquake with user input fs
- MSF* Scaling factor from CSR, MSF*=1, based on Item 2 of Page C.
- ec Volumetric strain for saturated sands
- dz Calculation segment, dz=0.050 ft
- dsz Settlement in each segment, dz
- dp User defined print interval

B-7.cal

dsp settlement in each print interval, dp
Gmax Shear Modulus at low strain
g_eff gamma_eff, Effective shear Strain
g*Ge/Gm gamma_eff * G_eff/G_max, Strain-modulus ratio
ec7.5 Volumetric Strain for magnitude=7.5
Cec Magnitude correction factor for any magnitude
ec Volumetric strain for unsaturated sands, ec=Cec * ec7.5
NoLiq No-Liquefy Soils

References:

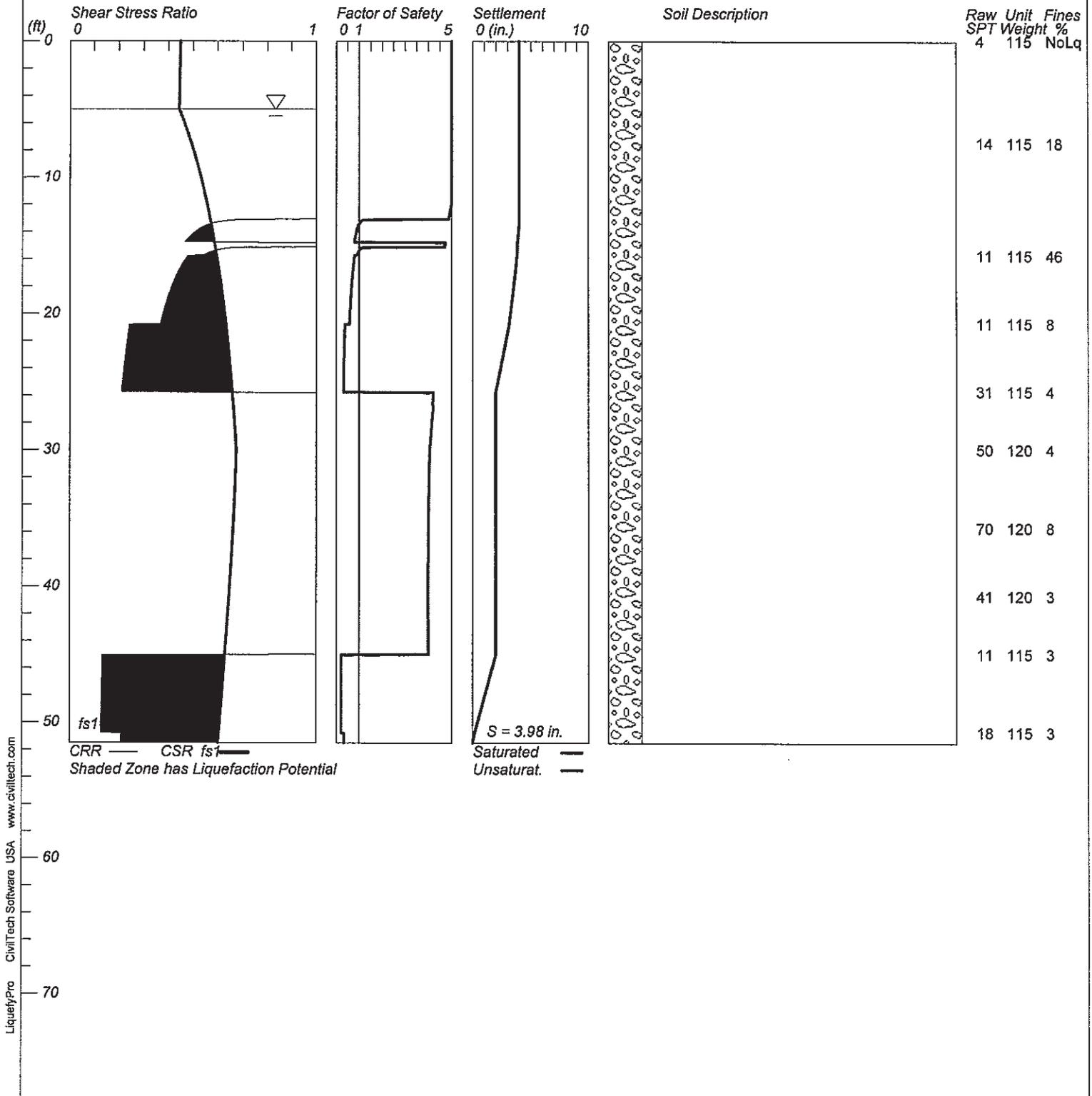
1. NCEER workshop on Evaluation of Liquefaction Resistance of Soils. Youd, T.L., and Idriss, I.M., eds., Technical Report NCEER 97-0022.
SP117. Southern California Earthquake Center. Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California. University of Southern California. March 1999.
2. RECENT ADVANCES IN SOIL LIQUEFACTION ENGINEERING AND SEISMIC SITE RESPONSE EVALUATION, Paper No. SPL-2, PROCEEDINGS: Fourth International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, San Diego, CA, March 2001.
3. RECENT ADVANCES IN SOIL LIQUEFACTION ENGINEERING: A UNIFIED AND CONSISTENT FRAMEWORK, Earthquake Engineering Research Center, Report No. EERC 2003-06 by R.B Seed and etc. April 2003.

LIQUEFACTION ANALYSIS

Castaic Sports Complex

Hole No.=B-9 Water Depth=5 ft Surface Elev.=1,132
 Ground Improvement of Fill=5 ft

Magnitude=6.6
 Acceleration=0.53g



LiquefyPro CivilTech Software USA www.civiltech.com

LIQUEFACTION ANALYSIS SUMMARY
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Font: Courier New, Regular, Size 8 is recommended for this report.
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Complex\B-9.liq
 Input File Name: \\GC-IRV\Documents\$dchu\My Documents\Design\COLA\207247029, Castaic Pool
 Title: Castaic Sports Complex
 Subtitle: 207247029

Surface Elev.=1,132
 Hole No.=B-9
 Depth of Hole= 51.50 ft
 Water Table during Earthquake= 5.00 ft
 Water Table during In-Situ Testing= 45.00 ft
 Max. Acceleration= 0.53 g
 Earthquake Magnitude= 6.60

Input Data:

Surface Elev.=1,132
 Hole No.=B-9
 Depth of Hole=51.50 ft
 Water Table during Earthquake= 5.00 ft
 Water Table during In-Situ Testing= 45.00 ft
 Max. Acceleration=0.53 g
 Earthquake Magnitude=6.60

1. SPT or BPT Calculation.
 2. Settlement Analysis Method: Tokimatsu/Seed
 3. Fines Correction for Liquefaction: Idriss/Seed
 4. Fine Correction for Settlement: During Liquefaction*
 5. Settlement Calculation in: Liq. zone only
 6. Hammer Energy Ratio, Ce = 1.3
 7. Borehole Diameter, Cb= 1
 8. Sampling Method, Cs= 1
 9. User request factor of safety (apply to CSR) , User= 1.3
 Plot one CSR curve (fsl=User)
 10. Use Curve Smoothing: No
- * Recommended Options

Fill on Top= 5 ft Fill Unit weight= 125 pcf
 Depth of this report is based on original ground surface, not based on fill
 1 atm (atmosphere) = 1 tsf (ton/ft2)

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
0.00	4.00	115.00	NoLiq
7.50	14.00	115.00	18.00
15.75	11.00	115.00	46.00
20.75	11.00	115.00	8.00
25.75	31.00	115.00	4.00
30.00	50.00	120.00	4.00
35.75	70.00	120.00	8.00
40.75	41.00	120.00	3.00
45.00	11.00	115.00	3.00
50.75	18.00	115.00	3.00

Output Results:

Settlement of Saturated Sands=3.98 in.
 Settlement of Unsaturated Sands=0.00 in.
 Total Settlement of Saturated and Unsaturated Sands=3.98 in.
 Differential Settlement=1.992 to 2.630 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.
0.00	2.00	0.45	5.00	3.98	0.00	3.98
5.00	2.00	0.44	5.00	3.98	0.00	3.98
10.00	2.77	0.53	5.00	3.98	0.00	3.98
15.00	2.77	0.59	4.71	3.83	0.00	3.83
20.00	0.38	0.63	0.60*	3.22	0.00	3.22
25.00	0.21	0.66	0.33*	2.14	0.00	2.14
30.00	2.74	0.67	4.06	1.95	0.00	1.95

					B-9.sum	
35.00	2.66	0.66	4.00	1.95	0.00	1.95
40.00	2.58	0.65	3.98	1.95	0.00	1.95
45.00	2.51	0.63	4.00	1.95	0.00	1.95
50.00	0.13	0.61	0.21*	0.41	0.00	0.41

* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

Units: Depth = ft, Stress or Pressure = atm (tsf), Unit Weight = pcf, Settlement = in.

1 atm (atmosphere) = 1 tsf (ton/ft²)

CRRm Cyclic resistance ratio from soils

CSRSf Cyclic stress ratio induced by a given earthquake (with user request factor of

safety)

F.S. Factor of Safety against liquefaction, F.S.=CRRm/CSRSf

S_sat Settlement from saturated sands

S_dry Settlement from Unsaturated Sands

S_all Total Settlement from Saturated and Unsaturated Sands

NOliq No-Liquefy Soils

APPENDIX C

MITIGATION MONITORING AND REPORTING PROGRAM

**MITIGATION MONITORING AND REPORTING PROGRAM:
CASTAIC SPORTS POOLS COMPLEX
CASTAIC, CALIFORNIA**

Section 21081.6 of the Public Resources Code, enacted by passage of AB 3180 (Cortese Bill), requires public agencies approving projects with significant environmental impacts to adopt a Mitigation Monitoring and Reporting Program. This objective of the program is to ensure that mitigation measures adopted to avoid or mitigate potentially significant environmental impacts are implemented. Section 21081.6 of the Public Resources Code requires all state and local agencies to establish monitoring and reporting programs whenever approval of a project relies upon a mitigated negative declaration or an environmental impact report (EIR). In accordance with these requirements, this mitigation monitoring and reporting program has been prepared to ensure that mitigation measures identified in the Initial Study/Mitigated Negative Declaration for the proposed construction and operation of the Castaic Pool Complex, 31230 Castaic Road, Castaic, California 91384 (or subsequent revisions thereto), are implemented in an effective and timely manner, and that identified impacts are avoided or mitigated to a level of insignificance. This plan identifies responsible parties for the mitigation program, and includes a detailed discussion of monitoring and reporting procedures for each mitigation measure.

I. Responsible Party

The Los Angeles County Department of Public Works (DPW), or its designee, will be responsible for implementing and reporting mitigation measures in this program. DPW will have responsibility for ensuring that mitigation measures are accomplished in an environmentally responsible manner. DPW will be responsible for ensuring that the status of mitigation measures is reported in accordance with this program. DPW will be responsible for ensuring that the cost of mitigation is included in its budget, as appropriate.

DPW will be responsible for program oversight and implementing construction-related mitigation measures. Mitigation measures will be included in applicable requests for proposals (RFP), specifications and procedures issued for construction of the pool complex within the scope of this project. Other mitigation measures funded by the Design Builder will be subject to oversight by the DPW. In addition, DPW will be responsible for ensuring that mitigation measures are properly carried out by designated and qualified personnel, which may include specialty contractors.

The Los Angeles County Department of Parks and Recreation (DPR), or its designee, will be responsible for ensuring that applicable mitigation measures are carried forward in operational and maintenance procedures for the pool complex.

II. Mitigation Requirements

Based on the findings of the Initial Study, mitigation measures are not required for aesthetics, agriculture and forest resources, air quality, biological resources, greenhouse gases, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation and transportation/traffic. Specific mitigation measures are required for cultural resources, geology and soils, and hazards/hazardous materials. Potentially significant impacts in these environmental resource areas will be avoided or minimized with implementation of thirty-nine (39) specific mitigation measures summarized on Table C-1.

III. Schedule and Reporting Frequency

Table C-2 describes the method for executing the mitigation measure, organization responsible for implementing the measure, organization responsible for funding the measure, estimated completion date for each measure, frequency of reporting, and significance after mitigation. Due to possible funding conditions and other external factors, facility construction and operation could be delayed. These delays may also affect the start and completion of mitigation measures.

Table C-1. Summary of Mitigation Measures

Category	Item	Mitigation No.	Mitigation Measure	Initial Study Section
<i>Air Quality</i>	1	Air 1	Water for Dust Control	2.III.a
	2	Air 2	Control Traffic Speeds on the Construction Site	2.III.a
	3	Air 3	Suspend Excavation and Grading During High Winds	2.III.a
	4	Air 4	Restrict Equipment Idling Time	2.III.a
<i>Biological Resources</i>	5	Bio 1	Pre-Construction Nesting Bird Survey	2.IV.d
<i>Cultural Resources</i>	5	Cultural 1	Archaeological Monitoring	2.V.b
	6	Cultural 2	Inadvertent Discovery of Archaeological Materials	2.V.b
	7	Cultural 3	Paleontological Monitoring	2.V.c
	8	Cultural 4	Sediment Sampling	2.V.c
	9	Cultural 5	Inadvertent Discovery of Paleontological Materials	2.V.c
	10	Cultural 6	Paleontological Monitoring Report	2.V.c
	11	Cultural 7	Inadvertent Discovery of Human Remains	2.V.d
<i>Geology and Soils</i>	12	Soils 1	Liquefaction Mitigation	2.VI.a.iii
	13	Soils 2	Erosion Control	2.VI.b
	14	Soils 3	Reuse of Topsoil	2.VI.b
	15	Soils 4	Use of Berms/Plastic Sheeting	2.VI.b
	16	Soils 5	Minimize Soil Exposure	2.VI.b
	17	Soils 6	Best Management Practices for Earthwork	2.VI.b
	18	Soils 7	Watering for Dust Control	2.VI.b
	19	Soils 8	Revegetation to Prevent Erosion	2.VI.b
	20	Soils 9	Geotechnical Recommendations	2.VI.c
	21	Soils 10	Geotechnical Recommendations for Expansive Soils	2.VI.d
<i>Hazards and Hazardous Materials</i>	22	Hazards 1	Soil Management Plan	2.VIII.a
	23	Hazards 2	Hydrogen Sulfide Monitoring During Construction	2.VIII.a
	24	Hazards 3	Hydrogen Sulfide Monitoring (Underground Structures)	2.VIII.a
<i>Hydrology and Water Quality</i>	25	Water 1	Avoid Flooding on Castaic Road	2.IX.c
	26	Water 2	Avoid Ponding Near Structures	2.IX.c
	27	Water 3	Erosion Control Measures	2.IX.c
	28	Water 4	Keep Washwater Out of Storm Drains During Construction	2.IX.c
	29	Water 5	Covering and Storage of Construction Materials	2.IX.c
	30	Water 6	Keep Washwater Out of Storm Drains During Operation	2.IX.f
<i>Noise</i>	31	Noise 1	Operate Vehicles and Equipment Away From Residences	2.XII.a
	32	Noise 2	Equipment Noise Abatement	2.XII.a
	33	Noise 3	Noise Barriers	2.XII.a
	34	Noise 4	Additional Equipment Noise Abatement	2.XII.a
	35	Noise 5	Compliance with L.A. County Noise Control Ordinance	2.XII.a
	36	Noise 6	Posting of Notice on Site	2.XII.a
	37	Noise 7	Advance Notice of Vibro-Compaction Noise	2.XII.b
	38	Noise 8	Vibration Noise Reduction Plan (Vibro-Compaction Noise)	2.XII.b

The monitoring and accomplishment of each mitigation measure will be documented on a Mitigation Monitoring Report form (see Exhibit C-1). This form will be filled out by the appropriate individual in the event of an inadvertent discovery of archaeological materials, paleontological materials, or human remains as described in Table C-2. Supplemental recordkeeping, report preparation and documentation will be required for some mitigation measures. The Mitigation Monitoring Report form will be filled out by the appropriate individual verifying that steps to prevent or minimize environmental degradation have been completed as described in Table C-2. Monitoring reports will be submitted to the County Department of Public Works and County Department of Parks and Recreation (Attn: Environmental Section Head), retained in the County's project files, and be available for inspection upon request. Completion of these forms will demonstrate and document compliance with Public Resources Code 21081.6.

Table C-2. Implementation of Mitigation Measures

Mitigation No.	Mitigation Measure	Method for Execution of Mitigation	Entity Responsible for Mitigation Monitoring	Completion Date	Frequency of Reporting	Significance After Mitigation
<i>Air 1</i>	Water for Dust Control	Emissions of particulate matter will be reduced by approximately 50 percent with watering for dust control. All disturbed areas, including storage piles and unpaved surfaces which are not being actively used for construction, shall be effectively stabilized as needed for dust emissions using water, chemical stabilizer or suppressants, covered with a tarp or other suitable cover.	Los Angeles County Department of Public Works and Design Builder	During Construction	Weekly during earthwork	Less than Significant
<i>Air 2</i>	Control Traffic Speeds on the Construction Site	Traffic speeds on unpaved areas shall be limited to 15 miles per hour (mph).	Los Angeles County Department of Public Works and Design Builder	During Construction	Weekly during earthwork	Less than Significant
<i>Air 3</i>	Suspend Excavation and Grading During High Winds	Excavation and grading activities shall be suspended when winds exceed 20 mph.	Los Angeles County Department of Public Works and Design Builder	During Construction	Weekly during earthwork	Less than Significant
<i>Air 4</i>	Restrict Equipment Idling Time	Equipment idling time will be restricted to 15 minutes maximum or equipment must be shut off.	Los Angeles County Department of Public Works and Design Builder	During Construction	Weekly during earthwork	Less than Significant
<i>Bio 1</i>	Pre-Construction Nesting Bird Survey	Any vegetation removal, including tree removal, that occurs between February 1 and September 1 will require a pre-construction nesting bird survey to be conducted by a qualified biologist. Any active nests should be avoided and provided with a minimum 500 ft buffer or as determined by a biological monitor in coordination with the California Department of Fish and Game.	Los Angeles County Department of Public Works and Design Builder	Prior to Construction	Bi-weekly during earthwork	Less than Significant

Table C-2. Implementation of Mitigation Measures (Cont'd)

Mitigation No.	Mitigation Measure	Method for Execution of Mitigation	Entity Responsible for Mitigation Monitoring	Completion Date	Frequency of Reporting	Significance After Mitigation
<i>Cultural 1</i>	Archaeological Monitoring	During construction, earthwork will be monitored by a qualified archaeologist that meets Secretary of the Interior's standards. The monitor will attend the pre-grading meeting(s) with contractors to explain and coordinate requirements and procedures for the inadvertent discovery of cultural materials during construction.	Los Angeles County Department of Public Works and Design Builder	During Construction	Weekly during earthwork	Less than Significant
<i>Cultural 2</i>	Inadvertent Discovery of Archaeological Materials	In the event any archaeological materials or subsurface deposits are exposed during ground disturbance, the construction contractor will cease activity in the affected area (e.g., redirect activities into another area within the site) until the discovery can be evaluated by a qualified archaeologist or historic resources specialist, as required, and appropriate treatment measures implemented. If the discovery proves to be significant pursuant to § 15064.5(c) of CEQA Guidelines, additional work such as testing or data recovery will be conducted as warranted. Methods during monitoring and/or recovery of archaeological resources shall be documented in a report of findings.	Los Angeles County Department of Public Works and Design Builder	During Excavation and Grading	Upon discovery and at completion of construction	Less than Significant
<i>Cultural 3</i>	Paleontological Monitoring	All project-related ground disturbances in Quaternary older alluvium or the Saugus Formation will be monitored by a qualified paleontological monitor as these geologic units have a high paleontological sensitivity. A qualified paleontologist will be retained to supervise monitoring of construction excavations.	Los Angeles County Department of Public Works and Design Builder	During Construction	Weekly during earthwork	Less than Significant

Table C-2. Implementation of Mitigation Measures (Cont'd)

Mitigation No.	Mitigation Measure	Method for Execution of Mitigation	Entity Responsible for Mitigation Monitoring	Completion Date	Frequency of Reporting	Significance After Mitigation
Cultural 4	Sediment Sampling	In the event that Saugus Formation is encountered during construction monitoring, construction activities will be halted and sediment sampling for significant microfossils will be conducted as this formation is known to yield very small vertebrate specimens that may only be recovered via screen washing and hand picking. The fossils found, if any, would then be inspected and evaluated in order to determine their significance and make additional mitigation recommendations. The collection of additional matrix for screen-washing is recommended at the discretion of the qualified paleontologist. At each fossil locality, field data forms will be used to record pertinent geologic data, stratigraphic sections will be measured, and appropriate sediment samples will be collected and submitted for analysis. Recovered fossils will be prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis, and repositied in a designated paleontological curation facility. The most likely repository is the Los Angeles County Museum of Natural History. The <i>qualified</i> paleontologist will prepare a final monitoring and mitigation report to be filed with the County of Los Angeles Department of Public Works and the repository.	Los Angeles County Department of Public Works and Design Builder	During Construction	Upon completion of monitoring	Less than Significant
Cultural 5	Inadvertent Discovery of Paleontological Materials	In the event paleontological resources are encountered during earthwork, the paleontological monitor would have the authority to cease activity in the affected area (e.g., divert grading away from exposed fossils and redirect activities into another area) until the resources can be evaluated, and the appropriate treatment measures implemented. The paleontologist would determine if the paleontological material should be salvaged, identified and permanently preserved. Recovered fossils will be prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis, and repositied in a designated paleontological curation facility.	Los Angeles County Department of Public Works and Design Builder	During Construction	Upon discovery and at completion of construction	Less than Significant

Table C-2. Implementation of Mitigation Measures (Cont'd)

Mitigation No.	Mitigation Measure	Method for Execution of Mitigation	Entity Responsible for Mitigation Monitoring	Completion Date	Frequency of Reporting	Significance After Mitigation
<i>Cultural 6</i>	Paleontological Monitoring Report	The qualified paleontologist will prepare a final monitoring and mitigation report to be filed with the County of Los Angeles Department of Public Works	L.A. County Department of Public Works and Design Builder	Upon completion of monitoring	Upon completion of monitoring	Less than Significant
<i>Cultural 7</i>	Inadvertent Discovery of Human Remains	In the event human remains are encountered during project construction, the Los Angeles County Coroner shall be immediately contacted to determine whether or not investigation of the cause of death is required. The Coroner shall make a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The Coroner will be notified of the find immediately. In the event the remains are Native American in origin, the Native American Heritage Commission shall be contacted to determine procedures for protection and preservation of remains, including reburial, as provided in the CEQA Guidelines, Section 15064.5(e).	Los Angeles County Department of Public Works and Design Builder	During Construction	Following each discovery (or monthly)	Less than Significant
<i>Soils 1</i>	Geotechnical Recommendations	The proposed pool complex would be designed and constructed in accordance with liquefaction recommendations contained in Ninyo & Moore (2010a) and constraints of the applicable sections of the County building code. Mitigation will include measures from among the following: recompact mat, vibro-compaction, stone columns, or a geopier system. The contractor will be advised to select from the options available that are deemed appropriate.	Los Angeles County Department of Public Works and Design Builder	By Final Design	Prior to construction	Less than Significant
<i>Soils 2</i>	Erosion Control	Standard erosion control measures such as scheduling to avoid work during rainy season/monitoring of weather, use of soil binders, straw mulch, earth dikes and drainage swales, would be implemented during any ground disturbing activities (e.g., excavation and/or grading operations).	Los Angeles County Department of Public Works and Design Builder	During Construction	Weekly during earthwork	Less than Significant

Table C-2. Implementation of Mitigation Measures (Cont'd)

Mitigation No.	Mitigation Measure	Method for Execution of Mitigation	Entity Responsible for Mitigation Monitoring	Completion Date	Frequency of Reporting	Significance After Mitigation
Soils 3	Reuse of Topsoil	Any topsoil removed from the site would be placed in the immediate area and used for re-compaction purposes.	Los Angeles County Department of Public Works and Design Builder	During Construction	Weekly during earthwork	Less than Significant
Soils 4	Use of Berms	For excavations that occur during the rainy season (November through April), installation of berms and/or plastic sheeting should be utilized.	Los Angeles County Department of Public Works and Design Builder	During Construction	Weekly during earthwork	Less than Significant
Soils 5	Minimize Soil Exposure	Earthwork would be planned and conducted in such a manner as to minimize the duration of exposure of unprotected soils.	Los Angeles County Department of Public Works and Design Builder	During Construction	Weekly during earthwork	Less than Significant
Soils 6	Best Management Practices for Earthwork	Earthwork would be conducted using best management practices, such as single point construction entries, to minimize erosion during demolition and construction.	L.A. County Department of Public Works and Design Builder	During Construction	Weekly during earthwork	Less than Significant
Soils 7	Watering for Dust Control	In order to minimize soil loss, earthwork would include watering for dust control.	Los Angeles County Department of Public Works and Design Builder	During Construction	Weekly during earthwork	Less than Significant
Soils 8	Revegetation to Prevent Erosion	Landscaping will be reestablished, or gravel placed, in the disturbed areas within 90 days after construction is completed on each phase, thereby reducing the potential for erosion.	Los Angeles County Department of Public Works and Design Builder	During Construction	Weekly during earthwork	Less than Significant

Table C-2. Implementation of Mitigation Measures (Cont'd)

Mitigation No.	Mitigation Measure	Method for Execution of Mitigation	Entity Responsible for Mitigation Monitoring	Completion Date	Frequency of Reporting	Significance After Mitigation
Soils 9	Geotechnical Recommendations	The proposed project would be designed and constructed in accordance with the recommendations of the project-specific geotechnical investigation including, but not limited to: review and approval of grading and foundation plans prior to construction; and, observation of compaction by a soil engineer or representative.	Los Angeles County Department of Public Works and Design Builder	Prior to Final Design	Prior to construction	Less than Significant
Soils 10	Geotechnical Recommendations (Expansive Soils)	The proposed pool complex will be designed and constructed in accordance with site-specific geotechnical recommendations contained in the report entitled <i>Geotechnical Evaluation Castaic Pool Complex</i> by Ninyo & Moore (2010). To reduce the potential hazards from expansive soils, existing soils and loose alluvial soils would be overexcavated and recompacted in areas where new structures will be placed.	Los Angeles County Department of Public Works and Design Builder	Prior to Final Design	Prior to construction	Less than Significant
Hazards 1	Soil Management Plan	The contractor will be required to follow the provisions of a soil management plan that will include procedures to follow in the event soil contamination is encountered during earthwork activities. The soil management plan will specify procedures for the disposal of contaminated soil.	Los Angeles County Dept of Public Works and Design Builder	During construction	Upon occurrence and weekly thereafter during earthwork	Less than Significant
Hazards 2	Hydrogen Sulfide Monitoring During Construction	The contractor will be required to implement a monitoring program for hydrogen sulfide during construction activities on the site.	Los Angeles County Dept of Public Works and Design Builder	During construction	Weekly during earthwork	Less than Significant
Hazards 3	Hydrogen Sulfide Monitoring for Permanent Underground Structures	In the event that any enclosed, underground structure (e.g., basement or utility vault) is constructed as part of the pool complex, the County of Los Angeles will implement a monitoring program for hydrogen sulfide gas.	Los Angeles County Dept of Parks and Recreation	During Operation	Quarterly	Less than Significant
Water 1	Avoid Flooding on Castaic Road	The existing natural drainage and current surface flows from Castaic Road will be conveyed to and across the pool complex site to avoid flooding along Castaic Road.	L.A. County Department of Public Works and Design Builder	Prior to Final Design	Upon completion of design	Less than Significant

Table C-2. Implementation of Mitigation Measures (Cont'd)

Mitigation No.	Mitigation Measure	Method for Execution of Mitigation	Entity Responsible for Mitigation Monitoring	Completion Date	Frequency of Reporting	Significance After Mitigation
Water 2	Avoid Ponding Near Structures	All surface drainage would be directed away from structures so that ponding of water is not allowed, especially near foundations.	Los Angeles County Department of Public Works and Design Builder	Prior to Final Design	Upon completion of design	Less than Significant
Water 3	Erosion Control Measures	Erosion control measures (such as sand bags and berms) would be implemented during construction to minimize the potential for sediment to be picked up and transported off-site or by runoff.	Los Angeles County Dept of Public Works and Design Builder	During construction	Weekly during earthwork	Less than Significant
Water 4	Prohibit Washwater from Entering Storm Drains During Construction	Construction equipment would not be rinsed off on-site in such a manner to affect nearby drainageways. The contractor will be required to ensure that water used to rinse off equipment on the site does not enter the storm drains.	Los Angeles County Dept of Public Works and Design Builder	During construction	Weekly during earthwork	Less than Significant
Water 5	Covering and Storage of Construction Materials	Construction materials (when not in use) will be covered and stored in contained areas away from any drainage areas.	Los Angeles County Dept of Public Works and Design Builder	During construction	Weekly during earthwork	Less than Significant
Water 6	Prohibit Washwater from Entering Storm Drains During Operations	Cleaning and maintenance procedures for the pool complex will include prohibiting any rinsewater or trash from entering storm drains.	Los Angeles County Dept of Parks and Recreation	During Operation	Quarterly	Less than Significant
Noise 1	Operation of Vehicles and Equipment Away From Residences	The construction contractor will conduct truck loading, unloading, hauling and other operations so that noise is kept to a minimum to avoid generating noise near the motel north of the site.	Los Angeles County Dept of Public Works and Design Builder	During construction	Weekly during earthwork	Less than Significant
Noise 2	Equipment Noise Abatement	All construction equipment will be outfitted with noise abatement devices and will be periodically inspected for effectiveness. No equipment shall have an unmuffled exhaust.	Los Angeles County Dept of Public Works and Design Builder	During construction	Weekly during earthwork	Less than Significant

Table C-2. Implementation of Mitigation Measures (Cont'd)

Mitigation No.	Mitigation Measure	Method for Execution of Mitigation	Entity Responsible for Mitigation Monitoring	Completion Date	Frequency of Reporting	Significance After Mitigation
Noise 3	Noise Barriers	The construction contractor will use and relocate temporary sound barriers, as required, to avoid excessive construction noise. Noise barriers can be made of heavy plywood or include moveable insulated sound blankets.	Los Angeles County Dept of Public Works and Design Builder	During construction	Weekly during earthwork	Less than Significant
Noise 4	Additional Equipment Noise Abatement	The construction contractor shall implement appropriate additional noise abatement measures including at a minimum, but not limited to, changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, or installing acoustic barriers around stationary construction noise sources.	Los Angeles County Dept of Public Works and Design Builder	During construction	Weekly during earthwork	Less than Significant
Noise 5	Compliance with L.A. County Noise Control Ordinance	The construction contractor will comply with the Los Angeles County Noise Control Ordinance and, in consideration of nearby residences, avoid construction activities during evening, nighttime, weekend, and holiday periods, except as authorized by the County. Construction work shall be limited to the hours of 7:00 a.m. to 4:00 p.m., except as authorized by the County.	Los Angeles County Dept of Public Works and Design Builder	During construction	Weekly during earthwork	Less than Significant
Noise 6	Posting of Notice on Site	The construction contractor will post (on the construction site fencing) a phone number for noise complaints on the site, and address complaints within two (2) business days.	Los Angeles County Dept of Public Works and Design Builder	During construction	Prior to construction	Less than Significant
Noise 7	Advance Notice of Vibro-Compaction Noise	In the event that vibro-compaction methods are used for liquefaction prevention, the County of Los Angeles Department of Public Works will provide surrounding residents and businesses (minimum radius of 300 ft) at least 30 days written notice of the start date and duration of pile driving activities.	Los Angeles County Dept of Public Works and Design Builder	During construction	Weekly during earthwork involving vibro-compaction	Less than Significant

Table C-2. Implementation of Mitigation Measures (Cont'd)

Mitigation No.	Mitigation Measure	Method for Execution of Mitigation	Entity Responsible for Mitigation Monitoring	Completion Date	Frequency of Reporting	Significance After Mitigation
Noise 8	Vibration Noise Reduction Plan (for Vibro-Compaction Noise)	<p>In the event that vibro-compaction methods are used for liquefaction prevention, construction contractor will prepare a Vibration Noise Reduction Plan containing site-specific noise attenuation measures to ensure maximum feasible noise attenuation. The plan shall be approved by the County of Los Angeles Department of Public Works. Noise reduction measures may include, but not be limited to: (1) limiting hours of operation of the vibro-compaction equipment based on input from surrounding neighbors and businesses; (2) conducting noise and vibration measurements to ensure effective noise reduction; and,(3) implementation of vibration reduction measures (as required based on measurements taken) under the supervision of an acoustical consultant.</p>	Los Angeles County Dept of Public Works and Design Builder	During construction	Weekly during earthwork involving vibro-compaction	Less than Significant

EXHIBIT C1

MITIGATION MONITORING REPORT FORM

MITIGATION MONITORING REPORT

SECTION 21081.6 PUBLIC RESOURCES CODE



County of Los Angeles
Department of Public Works
900 S. Fremont Avenue, 5th Floor (Attn: Mohamed Sultan)
Alhambra, CA 91803

Page ____ of ____

Project Name

Castaic Sports Complex Pools

Location

**31230 Castaic Road
Castaic, CA 91384**

File No.

Mitigation Measure No. _____

Mitigation Description:

Monitoring Frequency

Reporting Requirement

Remarks

The information contained in this report is an independent evaluation based on my personal observations and information provided to me. In accordance with Section 21081.6 of the California Public Resources Code, I hereby certify under penalty of perjury that the information contained herein is true and correct to the best of my knowledge.

Name of Person Completing Form _____ Title _____

Signature _____ Date Signed _____

Form Received by: _____ Signature: _____

Title: _____ Department/Division: _____ Date Rec'd: _____

Compliance Acceptance: Yes No

Date Rec'd by Report Recipient: _____

Mitigation Completed: Yes No

Date Completed: _____

Monitoring Completed: Yes No

Date Completed: _____

Attach additional sheets if necessary.

APPENDIX D

FIELD NOTES FROM BIOLOGICAL RECONNAISSANCE

FIELD NOTES FROM BIOLOGICAL RECONNAISSANCE: CASTAIC SPORTS POOLS COMPLEX CASTAIC, CALIFORNIA

A biological site reconnaissance was conducted for the proposed Castaic Sports Pools Complex site on the morning of 9 March 2010 (a mild, windy day). The site was walked along its perimeter and through its interior (J. Moeur and R. Crisologo).

Observations

The site of the proposed pools complex is a vacant property which may be subject to periodic attention. It is estimated that the site may be mowed at least once annually. Whatever natural irregularities of surface once there have been dragged (graded?) flat.

No meaningful assemblage of plants native to this region of the Transverse Range remains on this site. A dirt road crosses roughly the center of the site in a NW/SE direction. The dirt road experiences some vehicular traffic, but not likely very much. Sheet flow from Castaic Road has scoured a shallow channel from the NW corner of the site. No natural watercourses or wetlands occur on site. Rough sketch shows the main features; reference (south of the pine tree cluster) line is 200 feet in length.



CNDDDB Taxa

No suitable habitat exists on site for San Fernando spineflower or pallid bat. From their perspective, the site would be a barren locale without either the alluvial outwash soils the spineflower inhabits, or roost sites for pallid bats. It is possible pallid bats (and many other species) hunt over the site during the course of foraging in different places. No evidence of either taxon is present on site.

Pine Tree Cluster

A cluster of pines is found south of the fencing surrounding the North Agency HQ. Four *Pinus brutia* (non-native; sometimes called 'Calabrian', sometimes 'Turkish' pine) make up most of this patch. One arborvitae (*Thuja occidentalis*), and two 'cypresses' (either Italian or Leyland's cypress, *Cupressus sempervirens* or *Cupressocyperis leylandi*, respectively) are planted just south of the trees. No sign of great horned or barn owls roosting in these trees was noted. One flowering plum (*Prunus cerasifera*) was planted west of the pines. The entire spot appears to have been intended as a picnic grounds for employees of the North Agency HQ.

Borrow Pile

An elongate ridge of materials is heaped on the north side of the North Agency HQ facility. No burrowing owls in the mound. A few ground squirrel (*Spermophilus beecheyi*) burrows have been dug there.

Adjacent to Castaic Road

Mexican fan palms (*Washingtonia robusta*) and oleander (*Nerium oleander*) make a horticultural border on the west side of the North Agency HQ facility, inside its fence.

Monitoring Wells

A pair of monitoring wells are in the NE part of the site. The wells have thicker grass growing around them, lumpier ground in the immediate vicinity. Posts guard the wells from errant vehicles. Nothing of biological interest noted in the area of the wells.

Wet Ground in far NE corner

Cottonwoods (*Populus fremontii*) and a willow (*Salix* sp.) evidently have found some water close to the surface back here. Project area does not appear to extend to these trees. No direct concern about them, or habitat they afford.

Plantings along East Side

Landscaped sycamores (*Platanus racemosa*) and a pine of undetermined type have been set out in a raggedy line (N/S) leading toward the parking lot of the Castaic Sports Complex east of the site. All around them are park grasses, mown regularly. Nothing of inherent biological worth is found along the east side of the site.

Fenced Pylon

Square enclosure protects the feet of this power transmission pylon. Nothing of biological interest was apparent inside or around the fence.

General Biota Noted

A red-shouldered hawk (*Buteo lineatus*) was foraging in the area. It went repeatedly back to the thick trees along west side of Castaic Road. Black phoebe (*Sayornis nigricans*), house finches (*Carpodacus mexicanus*), gold finches (*Spinus tristis*), white-crown sparrows (*Zonotrichia leucophrys*), and American crows (*Corvus brachyrhynchos*) were seen at assorted places throughout the site.

The vacant site had patches of yellow fiddlenecks (*Amsinkia tessellata*), a popcorn flower (*Cryptantha* sp.), red clover (*Trifolium pratense*), bur clover (*Medicago* sp.), scattered tree tobacco (*Nicotiana glauca*), and two species of lupines (*Lupinus* spp.) growing in clumps and scattered throughout.

The drainage from Castaic Road pools up at the borrow pile. Rains had left muddy area where some tracks of large mammals could be discerned. Among the tracks were skunk (*Mephitis mephitis*), likely a house cat (*Felis silvestris*) [not likely bobcat (*Lynx rufus*)], domestic dog (*Canis familiaris*), raccoon (*Procyon lotor*), and other small mammals not identified.

Conclusion

No listed species apparent on the site. No particular mitigation would be necessary, as no permits of any kind would be required. Removal of the mature pine trees, if required, should be conducted sometime outside general bird breeding seasons, in order to minimize concerns related to Migratory Bird Treaty Act of 1918.

APPENDIX E
SOIL MANAGEMENT PLAN

SOIL MANAGEMENT PLAN: CASTAIC SPORTS POOLS COMPLEX CASTAIC, CALIFORNIA

This plan includes methods and procedures to be used for monitoring, management, and disposal of petroleum (i.e., total petroleum hydrocarbons [TPH])-impacted soil that may be encountered during earthmoving activities at the Castaic Sports Complex Pools site located at 31230 Castaic Road, Castaic, California 91384.

1.0 GENERAL

1.1 DEFINITIONS

A. **Potential TPH-impacted soil:** Excavated soil exhibiting visual staining, hydrocarbon odor, or portable photo ionization detector (PID) readings exceeding 100 parts per million by volume (ppmv).

B. **TPH-impacted soil:** Excavated soil containing detected concentrations of TPH or other petroleum-related compounds, as determined by the results of soil sample analyses.

C. **Non-impacted soil:** Soil that does not exhibit signs of visual staining or hydrocarbon odor and has a PID reading of less than 100 ppmv, and soil not containing detected concentrations of TPH, or other petroleum-related compounds, as determined by the results of soil sample analyses.

D. **Potential TPH-impacted zone:** Pipeline trench excavation area, because TPH-impacted soil from former pipeline release(s) may be present.

E. **TPH-impacted groundwater:** Groundwater removed from the pipeline trench containing detected concentrations of TPH or other petroleum-related compounds, as determined by the results of groundwater sample analyses.

F. **PID:** Photo-ionization detector, which is a field monitoring instrument for screening volatile organic compounds (VOCs).

G. **Mud:** Sand slurry used to abandon the pipeline in place.

1.2 PERFORMANCE REQUIREMENTS

While working within the Potential TPH-impacted Zone, the Contractor's excavation work shall be performed as follows:

1. Comply with requirements outlined in this Plan.
2. Screen excavated soil for the presence of TPH, using visual and odor observations and a PID.
3. Segregate potentially TPH-impacted soil.
4. Manage potentially TPH-impacted soil to prevent spreading on the Site and to prevent discharge to storm drains or other drainage areas.
5. Profile potentially TPH-impacted soil for transport and disposal.
6. Transport the TPH-impacted soil to an appropriately permitted disposal or recycling facility approved by the County of Los Angeles Department of Public Works

1.3 SUBMITTALS

A. Contractor will provide a copy of its Site-specific Health and Safety Plan (HASP) before beginning Site activities.

B. Submit copies of waste profile documentation for attachment to the final report.

C. Submit completed copies of waste manifests records for each load of TPH-impacted soil, and copies of bills of lading for each load of non-hazardous waste, after notification of receipt at the disposal facility, for attachment to the final report.

1.4 REGULATORY REQUIREMENTS

A. **Contractor Licensing** – Excavation and handling of TPH-impacted soils shall be performed by a Contractor appropriately licensed in the State of California and with HAZ-Hazardous Substance Removal Certification (pursuant to California Code of Regulations, Division 9, Title 16, Article 3., Classification).

B. **Training** – Personnel working within the potential TPH-impacted zone and their supervisors shall be trained and covered under the Hazardous Waste Operations and Emergency Response (HAZWOPER) requirements (pursuant to Code of Federal Regulations, Standard 29, Part 1910.120) and have a current 8-hour HAZWOPER update certificate.

Contractor shall comply with the HAZWOPER requirements including:

1. Training;
2. Training refreshers;
3. Medical surveillance; and
4. Safety and health program implementation.

Contractor shall also prepare a Site-specific HASP complying with HAZWOPER requirements for excavation and other work related to excavating, handling, or otherwise coming in contact with potentially TPH-impacted soil. Non-HAZWOPER trained personnel shall not excavate, handle, or otherwise come in contact with the TPH-impacted soil. Contractor shall designate, mark, and enforce an exclusion zone to prevent unauthorized contact with TPH-impacted soils. Contractor shall also supply, construct, and maintain a decontamination area, for personnel and equipment, at the perimeter of the exclusion zone.

C. **Dust and Emissions Control** – Comply with the requirements of the South Coast Air Quality Management District's Fugitive Dust Regulations and Rule 1166.

D. **TPH-Impacted Soil Profiling and Disposal** – TPH-impacted soil and other potential hazardous or regulated waste shall be profiled for transport and disposal at a facility permitted to accept the impacted soil. Soil profiling shall be conducted in accordance with the procedures outlined in Part 2.3 of this Soil Management Plan.

E. **TPH-Impacted Soil Transportation** – TPH-impacted soil shall only be transported by a Department of Transportation (DOT)-licensed waste hauler. Shipping documents acceptable to the receiving facility and in compliance with State and Federal requirements shall be used for transport of TPH-impacted soil. Each load must be accompanied by a signed waste manifest or bill-of-lading. Each load must be completely covered with a secured tarp.

1.5 PROJECT CONDITIONS

TPH-impacted soil associated with underground petroleum pipelines (i.e., the potential TPH-impacted zone) located within the area of proposed Castaic Sports Complex pool facilities may be encountered during facility construction. Previous investigations performed at the Site do not indicate that the soil along the Exxon abandoned pipelines contain elevated concentrations of TPH. Nevertheless, facility excavations are considered to be potential TPH-impacted zones.

2.0 EXECUTION

2.1 FIELD SCREENING OF EXCAVATED SOIL

A. While working within the potential TPH-impacted zone, field screen the excavated soil for the presence of petroleum hydrocarbons using visual and odor observations and using a PID calibrated to

hexane. Each bucket of soil removed from the trench shall be screened for visual signs of soil staining and hydrocarbon odors and with the PID. PID measurements shall be taken no more than 3 inches above the surface of the excavated soil. Excavated soil exhibiting signs of staining or hydrocarbon odor, or having a PID reading greater than 50 ppmv shall be identified as potentially TPH-impacted soil, and be segregated and stored separately from non-impacted soil.

2.2 SOIL SEGREGATION AND STORAGE

Excavated soil shall be placed inside container bins lined with Visqueen® plastic sheeting having a minimum thickness of 6 mil. Seams in the Visqueen® sheeting shall have a minimum 12-inch overlap. Potentially TPH-impacted soil shall be segregated from non-impacted soil in separate container bins. The storage bins shall be placed at least 100 feet from any surface water body. At the end of each work day, the soil storage bins lids shall be closed. Each storage bin containing potentially TPH-impacted soil shall be labeled "Potentially TPH-Impacted Soil." At the end of each day, the contractor shall document the location of the potentially TPH-impacted soil storage bins on Site map.

2.3 SOIL SAMPLING AND ANALYSIS

A. Excavated soils shall be field screened with a PID. If screened soil contains total VOC concentrations exceeding 100 ppmv or appears to be visually impacted by petroleum hydrocarbons, the soil shall be segregated, and a sample shall be collected and submitted for laboratory analysis.

B. The location of any reading above background level on the PID shall be noted.

C. Samples shall be collected from the open trench.

D. Each soil sample shall be placed in a laboratory provided, wide-mouthed, 4-ounce glass jar with a Teflon-seal lid that is labeled and place in a chilled cooler after collection. The sample label shall contain the following information:

1. Sample name or identification (ID).
2. Storage bin identification number.
3. Date and time of sample collection.
4. Project identification.

Soil samples shall be transported in a chilled cooler to a State of California Department of Public Health Environmental Laboratory Accreditation Program-accredited laboratory. The samples shall remain in a chilled cooler until received by the laboratory. A completed-chain-of-custody document shall accompany the samples at all times.

E. Soil samples will be analyzed by the laboratory for TPH with carbon chain identification by United States Environmental Protection Agency (US EPA) Method 8015B and full scan VOCs by US EPA Method 8260B. A limited number of samples (maximum of four) will be analyzed for the 17 California Code of Regulations Title 22 Metals by US EPA Methods 6010B/7471A, to accommodate appropriate soil disposal profiling.

F. Additional soil samples and analyses may be required by Contractor's proposed disposal facility, for soil profiling and acceptance.

2.4 SOIL CLASSIFICATION

A. Soil identified as non-impacted soil during the field screening may be reused on site as backfill material, if approved by the Professional Engineer.

B. Soil identified as potentially TPH-impacted soil shall be transported offsite for disposal or recycling.

2.5 LIQUID WASTE MANAGEMENT

A. The Contractor shall prevent rainfall run-off or other water from entering the TPH-impacted zone, utilizing methods appropriate for this Site. This may include, but not be limited to, placing plastic and sand bags to collect runoff.

B. If liquids are contained, collect and analyze samples as necessary to profile the liquid for disposal.

C. Removal of small quantities of water from the trench may be necessary. This water may contain concentrations of TPH and hydrocarbon constituents (i.e., TPH-impacted water). Contractor shall manage the TPH-impacted water removed from the trench in a manner that avoids endangering public health and property.

D. TPH-impacted water removed from the excavation will be contained in appropriate tanks or vessels or removed directly with a vacuum truck.

2.6 OFFSITE WASTE TRANSPORTATION

A. Use a State-approved manifest system so that waste hauled from the work area can be tracked from point of generation to ultimate disposal. The manifests must comply with the provisions of State and Federal DOT regulations. Disposal facilities to be used must be pre-approved by the County of Los Angeles.

B. Contractor shall be responsible for accurate completion of waste manifests. Transporters must sign the appropriate portions of the manifest and must comply with the provisions established in State and Federal DOT regulations. The disposal facility must sign the appropriate portions of the manifest and return it to the Contractor within 8 business hours of disposal.

2.7 TPH-IMPACTED SOIL HANDLING AND TRANSPORT

A. Utilize appropriate vehicles and operating practices to prevent spillage or leakage of waste materials from the vehicles during transportation.

B. Storage bins shall be properly lined with a material compatible with the wastes to be hauled.

C. Thoroughly decontaminate and inspect transport vehicles before leaving the work area. Each vehicle leaving the work area shall be inspected by the Contractor to ensure that no soil adheres to the wheels or undercarriage.

APPENDIX F

**PUBLIC REVIEW OF THE DRAFT INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION**

PUBLIC REVIEW OF THE DRAFT INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION FOR CASTAIC SPORTS COMPLEX POOLS

The County of Los Angeles Department of Public Works (DPW) placed the Draft Initial Study/Mitigated Negative Declaration for the proposed Castaic Sports Complex Pools (dated May 2011) on public review for a period of 30 days. Information on the notifications, document distribution and agency review are provided in this appendix.

F.1 Newspaper Notice

DPW published a Notice of Availability for the Draft Initial Study/Mitigated Negative Declaration for the proposed Castaic Sports Complex Pools in The Signal newspaper on May 15 and 16, 2011. This notice indicated that the public review period for the document would close on June 20, 2011. A copy of this notification is included as Exhibit F-1.

F.2 Posting of Notice at the Project Site

DPW posted a Notice of Availability for the Draft Initial Study/Mitigated Negative Declaration for the proposed Castaic Sports Complex Pools on the perimeter fence of the adjacent County of Los Angeles Department of Recreation and Parks - North Agency headquarters on May 18, 2011 (see photos). This notice indicated that the public review period for the document would close on June 20, 2011.





F.3 Los Angeles County Clerk Filing

A Notice of Completion was filed with the Los Angeles County Clerk on May 17, 2011. A copy of the notice is provided as Exhibit F-2. A Notice of Determination will be filed with the Los Angeles County Clerk once the project is approved by the County of Los Angeles Board of Supervisors.

F.4 Filing at State Clearinghouse

Copies of the Draft Initial Study/Mitigated Negative Declaration for the proposed Castaic Sports Complex Pools were mailed to 24 government agencies or organizations as shown in Exhibit F-4.

F.5 Distribution List

Copies of the Draft Initial Study/Mitigated Negative Declaration for the proposed Castaic Sports Complex Pools were mailed to 24 government agencies or organizations as shown in Exhibit F-4.

F.6 Comment Letters Received and Responses

Five local government agencies provided comments on the Draft Initial Study/Mitigated Negative Declaration. Each of these letters has been reprinted herein with substantive comments bracketed and numbered as shown in Exhibits F-5 through F-8. The California State Clearinghouse also provided a letter (Exhibit F-9) to indicate that no comments were received. A summary of comments raised and DPW responses is provided on Table F-1.

Table F-1. Responses to Comments Received on the Draft Initial Study/Mitigated Negative Declaration for Castaic Sports Complex Pools

Comment No. ¹	Comment Summary	Response
<i>Newhall County Water District (May 16, 2011)</i>		
1-1	Newhall Water District will provide water service to the pool complex.	Thank you for your letter. This information has been added to Section 2.XVII(d) of the Initial Study. Your letter will be provided to the Board of Supervisors with the Final Mitigated Negative Declaration prior to any decision on the project.
<i>California Department of Fish and Game (June 9, 2011)</i>		
2-1	Impacts to migratory wildlife affected by the project should be fully evaluated including proposals to remove/disturb native and ornamental landscaping and other nesting habitat for native birds. Impact evaluation may also include such elements as migratory butterfly roost sites and neo-tropical bird and waterfowl stop-over and staging sites.	Thank you for your letter. This evaluation has been added to Section 2.IV(d) of the Initial Study. Your letter will be provided to the Board of Supervisors with the Final Mitigated Negative Declaration prior to any decision on the project.
2-2	Proposed project activities (including disturbances to vegetation) should take place outside of the breeding bird season (February 1- September 1) to avoid take (including disturbances which would cause abandonment of active nests containing eggs and/or young). If project activities cannot avoid the breeding bird season, nest surveys should be conducted and active nests should be avoided and provided with a minimum buffer as determined by a biological monitor.	A mitigation measure to conduct a nesting bird survey has been added to Section 2.IV(d) of the Initial Study.
<i>County Sanitation Districts of Los Angeles County (June 9, 2011)</i>		
3-1	The Santa Clarita Valley Joint Sewerage System currently processes an average flow of 20.1 million gallons per day.	Thank you for your letter. This information has been added to Section 2.XVII(e) of the Initial Study. Your letter will be provided to the Board of Supervisors with the Final Mitigated Negative Declaration prior to any decision on the project.
3-2	The expected average wastewater flow from the first phase of the project is 5,100 gallons per day (gpd) and 3,000 gpd for the second phase.	This information has been added to Section 2.XVII(e) of the Initial Study.
3-3	The project may require an Industrial Wastewater Discharge Permit.	Section 2.XVII(e) of the Initial Study has been revised to include the information provided.

**Table F-1. Responses to Comments Received on the
Draft Initial Study/Mitigated Negative Declaration for Castaic Sports Complex Pools (Cont'd)**

Comment No.¹	Comment Summary	Response
<i>County Sanitation Districts of Los Angeles County (June 9, 2011) - Cont'd</i>		
3-4	Wastewater flow originating from the project will discharge directly to the District's Castaic Trunk Sewer located in Castaic Road south of Neely Street. This 15-inch diameter trunk sewer has a design capacity of 4.1 million gallons per day (mgd) and conveyed a peak flow of 1.3 mgd when last measured in 2008. A direct connection to a Districts' trunk sewer requires a Trunk Sewer Connection Permit issued by the Districts.	Section 2.XVII(e) of the Initial Study has been revised to include the information provided.
3-5	The District operates two water reclamation plants, Saugus WRP and Valencia WRP, which provide wastewater treatment in the Santa Clarita Valley. These interconnected facilities form a regional treatment system known as the Santa Clarita Valley Joint Sewerage System (SCVJSS) which has a design capacity of 28.1 mgd and currently processes an average flow of 20.2 mgd.	The County acknowledges and appreciates the information on wastewater systems from the Sanitation Districts. Section 2.XVII(b) of the Initial Study has been revised to incorporate this information.
3-6	The expected average wastewater flow from the project site is 7,880 gpd.	The flow rate indicated in Comment No. 3-2 has been added to Section 2.XVII(e) of the Initial Study.
3-7	(Information on District connection fees)	The County is aware of District connection fees for sewerage service and intends to provide such fees before seeking a permit to connect to the sewer.
3-8	For Federal Clean Air Act conformity, design capacities of Districts' wastewater facilities are based on SCAG regional growth forecasts. Districts intend to provide service up to the levels legally permitted.	This County project has been designed to accommodate the existing need for recreational facilities in accordance with regional growth forecasts established by SCAG.
<i>Los Angeles County Fire Department (August 22, 2011)</i>		
4-1	The development may require fire flows up to 5,000 gpm at 20 psi residual pressure for up to a 5-hr duration; fire will be based on square footage of the first floor and type of construction to be used. The exact fire flow will be determined with submittal of plans.	Thank you for your letter. The County of Los Angeles Department of Public Works will ensure that design of the pools complex will comply with fire flow requirements. Your letter will be provided to the Board of Supervisors with the Final Mitigated Negative Declaration prior to any decision on the project.
4-2	Fire hydrant spacing shall be 300 ft.	The County of Los Angeles Department of Public Works will ensure that design of the pools complex will comply with requirements for fire hydrant spacing.
4-3	No portion of lot frontage shall be more than 200 ft via vehicular access from a public fire hydrant.	The County of Los Angeles Department of Public Works will ensure that design of the pools complex will comply with requirements for the placement of fire hydrants.
4-4	No portion of building shall be more than 400 ft via vehicular access from a properly spaced public fire hydrant.	The County of Los Angeles Department of Public Works will ensure that design of the pools complex will comply with requirements for the placement of fire hydrants.
4-5	Additional hydrants will be required if hydrant spacing exceeds specified distances.	The County of Los Angeles Department of Public Works will ensure that design of the pools complex will comply with requirements for spacing of fire hydrants.

**Table F-1. Responses to Comments Received on the
Draft Initial Study/Mitigated Negative Declaration for Castaic Sports Complex Pools (Cont'd)**

Comment No. ¹	Comment Summary	Response
<i>Los Angeles County Fire Department (August 22, 2011) - Cont'd</i>		
4-6	Property is located in fire Zone 4, Very High Fire Hazard Severity Zone (VHFSZ) and must meet all applicable fire code and ordinance requirements for construction, access, water mains, fire hydrants, fire flows, brush clearance and fuel modification plans.	The County of Los Angeles Department of Public Works will ensure that design of the pools complex will comply with all applicable fire code and ordinance requirements for construction, access, water mains, fire hydrants, fire flows, brush clearance and fuel modification plans. Section 2.VIII(h) of the Initial Study has been revised to include the information provided.
4-7	Turning radii shall not be less than 32 ft. Turning area must be approved by the Fire Department for all driveways exceeding 150 ft in length.	The County of Los Angeles Department of Public Works will ensure that design of driveways for the pools complex will comply with requirements for adequate turning radii. Design plans will be provided to the County Fire Department for review and approval.
4-8	All on-site driveways/roadways shall provide minimum unobstructed width of 26 ft. Driveway is to be within 150 ft of all portions of the exterior walls of the first story of any building.	The County of Los Angeles Department of Public Works will ensure that design of the pools complex will comply with requirements for minimum unobstructed width for driveways and roadways, as well as distance from buildings.
4-9	Driveway width shall be increased when parallel parking is allowed and for fire lanes.	The County of Los Angeles Department of Public Works will ensure that design of the pools complex will comply with requirements for driveway widths.
4-10	No part of building can be within 100 ft of the drip line of a high voltage transmission line (66kV or greater).	The County of Los Angeles Department of Public Works will ensure that design of the pools complex will comply with requirements for setbacks from high voltage transmission lines. The proposed location of the pool building will be approximately 225 ft from the dripline of the transmission line west of the site
4-11	Any potential contamination encountered during construction must be addressed and mitigated according to the State/Federal guidelines prior to continuation of construction. The site health and safety plan should also address possibility of potential hydrocarbons and /or volatile organic compounds at the construction site.	The construction contractor will be required to follow the provisions of the Soil Management Plan included in Appendix E of the Initial Study/Mitigated Negative Declaration.

Note: ¹ Refer to letters reprinted in Exhibits F-5 through F-8.

Exhibit F-1. Proof of Publication

THE SIGNAL NEWSPAPER
24000 Creekside Rd
Valencia, Ca 91355

Proof of Publication
(2015.5 C.C.P.)

STATE OF CALIFORNIA,
COUNTY OF LOS ANGELES

I am a citizen of the United States, and a resident of the county aforesaid; I am over the age of eighteen years; and I am not a party to or interested in the notice published. I am the chief legal advertising clerk of the publisher of the

SIGNAL NEWSPAPER

a newspaper of general circulation, printed and published Daily in the city of Santa Clarita County of Los Angeles, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Los Angeles State of California, under the date of March 25, 1988

Case number NVC15880, that the notice, of which the annexed is a printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

5/15, 5/16

All in the year 2011

I certify (or declare) under penalty of perjury that the foregoing is true and correct

Dated at Valencia, California, this 16th day of May, 2011


Signature

**NOTICE OF AVAILABILITY
CASTAIC SPORTS COMPLEX POOLS
INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION**

PROJECT: Castaic Sports Complex Pools

LEAD AGENCY: County of Los Angeles Department of Public Works

PUBLIC REVIEW AND AVAILABILITY OF DOCUMENTS: In conformance with Section 15072 of California Environmental Quality Act (CEQA) Guidelines, the County is notifying the public of the availability of a Draft Initial Study and Mitigated Negative Declaration for this project. The County proposes to adopt a Mitigated Negative Declaration. This document is available for review at: the Castaic Public Library, 27971 Sican Canyon Road, Castaic, CA 91384 Phone: (661) 257-7410; and, the Valencia Public Library, 23743 Valencia Boulevard, Valencia, CA 91355 Phone: (661) 259-8942. The document is also available during normal business hours, Monday through Thursday, at County of Los Angeles Department of Public Works, 900 S. Fremont Avenue, 5th Floor Receptionist, Alhambra, CA 91803.

PROJECT LOCATION: The new swimming pool complex will be located at 31230 Castaic Road, Castaic, CA 91384. The new facility will be constructed on 3.5 acres of vacant County-owned land immediately north of the Los Angeles County Department of Parks and Recreation - North Agency Headquarters (south of the Days Inn Motel) along Castaic Road.

PROJECT DESCRIPTION: The County of Los Angeles Department of Public Works proposes to construct a new swimming pool complex that would be constructed in two phases. Phase I of the complex would include a recreational pool, shallow pool, splash pad, pool building and parking lot with a new entrance. Phase II would include expansion of the pool building, addition of an Olympic-size swimming pool, and a new parking lot east of the complex (construction of Phase II is contingent upon funding). The pool complex would be operated by the Los Angeles County Department of Parks and Recreation.

WRITTEN COMMENTS MAY BE MAILED TO:
Department of Public Works
Attn: Mr. Mohamed Sultan, PE, CCM
Project Management Division I
900 S. Fremont Avenue, 5th Floor
Alhambra, CA 91803

All written comment letters must be postmarked or otherwise received no later than June 20, 2011. Comments may be emailed to msultan@dpw.lacounty.gov or faxed to the attention of Mr. Sultan at (626) 979-5320. Emailed and faxed comments must be received by close of business no later than June 20, 2011. Should you have any questions, please contact Mr. Sultan at (626) 300-2349.

ProofPublicationAffidavit_1H

Exhibit F-2. Filing of Notice of Completion at Los Angeles County Clerk



GAIL FARBER, Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
<http://dpw.lacounty.gov>

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

May 9, 2011

ORIGINAL FILED

MAY 17 2011

IN REPLY PLEASE
REFER TO FILE: PJ-1

TO: All Interested Parties **LOS ANGELES, COUNTY CLERK**

FROM: Mohamed Sultan
Project Management Division I

**CASTAIC SPORTS COMPLEX POOLS PROJECT
NOTICE OF COMPLETION OF DRAFT INITIAL STUDY/MITIGATED NEGATIVE
DECLARATION**

The County of Los Angeles Department of Public Works proposes to construct a new swimming pool complex at 31230 Castaic Road, Castaic (unincorporated Los Angeles County), CA 91384. The pool complex would be constructed upon 3.5 acres of vacant County-owned land immediately north of the County of Los Angeles Department of Parks and Recreation - North Agency Headquarters. The pool complex would be constructed in two phases. Phase I of the complex would include a recreational pool, shallow pool, splash pad, pool building and parking lot with a new entrance. Phase II would include expansion of the pool building, addition of an Olympic-size swimming pool, and a new parking lot east of the complex (construction of Phase II is contingent upon funding). The pool complex would be operated by the County of Los Angeles Department of Parks and Recreation.

In accordance with the California Environmental Quality Act, the County has prepared a Draft Initial Study and proposes to adopt a Mitigated Negative Declaration for this project. The document is available for review at: the Castaic Public Library, 27971 Sloan Canyon Road, Castaic, CA 91384 Phone: (661) 257-7410; and, the Valencia Public Library, 23743 Valencia Boulevard, Valencia, CA 91355 Phone: (661) 259-8942. The document is also available during normal business hours, Monday through Thursday, at County of Los Angeles Department of Public Works, 900 South Fremont Avenue, 5th Floor Receptionist, Alhambra, CA 91803.

The public review period for the Mitigated Negative Declaration will close on June 20, 2011. Written comments may be mailed to:

**Department of Public Works
Attention Mr. Mohamed Sultan, Project Manager,
Project Management Division I
900 South Fremont Avenue, 5th Floor
Alhambra, California 91803**

Exhibit F-2. Filing of Notice of Completion at Los Angeles County Clerk (Cont'd)

All Interested Parties
May 9, 2011
Page 2

All written comment letters must be postmarked or otherwise received no later than June 20, 2011. Comments may be emailed to msultan@dpw.lacounty.gov or faxed to the attention of Mr. Sultan at (626) 979-5320. Emailed and faxed comments must be received by close of business no later than June 20, 2011. Should you have any questions, please contact Mr. Sultan at (626) 300-2349.

Thank you for your interest in this project.

MS:ms

Los Angeles County Registrar / Recorder
12400 Imperial Highway, Norwalk, CA
(800)201-8999

Business Filings

NORWALK

Cashier: L. MOORE



Tuesday, May 17, 2011 1:43 PM

<u>Item(s)</u>		
Fee	Qty	Total
NoC - County Posting Fee	1	\$75.00
Total		\$75.00

Customer payment(s):

Cash	\$80.00
Change	(\$5.00)

Exhibit F-3. Filing of Notice of Completion at State Clearinghouse

	
OPR Home > CEQAnet Home > CEQAnet Query > Search Results > Document Description	
Castaic Pools Complex	
SCH Number: 2011051032	
Document Type: MND - Mitigated Negative Declaration	
Project Lead Agency: Los Angeles County	
<hr/>	
Project Description	
The County of Los Angeles Department of Public Works proposes to construct a new swimming pool complex on 3.5 acres of vacant County-owned land immediately north of the Los Angeles County Department of Parks and Recreation - North Agency Headquarters along Castaic Road. The pool complex would be constructed in two phases. Phase I of the complex would include a recreational pool, shallow pool, splash pad, pool building and parking lot with a new entrance. Phase II would include expansion of the pool building, addition of an Olympic-size swimming pool, and a new parking lot east of the complex (construction of Phase II is contingent upon funding). The pools complex would be operated by the County of Los Angeles Department of Parks and Recreation.	
<hr/>	
Contact Information	
Primary Contact: Mohamed Sultan Los Angeles County 626 300 2349 900 S. Fremont Ave., 5th Floor Alhambra, CA 91803	
<hr/>	
Project Location	
County: Los Angeles City: Region: Cross Streets: Castaic Road and Ridge Route Road Latitude/Longitude: Parcel No: 2865-012-916, -907 Township: 5N Range: 17W Section: 25 Base: Other Location Info: City/Nearest Community: Castaic	
<hr/>	
Proximity To	
Highways: I-5 Airports: No Railways: No Waterways: Castaic Creek Schools: Yes Land Use: LU: Vacant Z: OS-PR GPU: OS	
<hr/>	
Development Type	
Recreational (Public Swimming Pools)	
<hr/>	
Local Action	
<hr/>	

Project Issues

Aesthetic/Visual, Agricultural Land, Air Quality, Archaeologic-Historic, Wildlife, Growth Inducing, Toxic/Hazardous, Traffic/Circulation, Vegetation, Flood Plain/Flooding, Forest Land/Fire Hazard, Geologic/Seismic, Minerals, Drainage/Absorption, Landuse, Cumulative Effects, Other Issues (GHG), Soil Erosion/Compaction/Grading, Noise, Water Quality, Water Supply, Solid Waste, Public Services, Recreation/Parks

Reviewing Agencies (Agencies in **Bold Type** submitted comment letters to the State Clearinghouse)

Resources Agency; Department of Fish and Game, Region 5; Department of Parks and Recreation; Department of Water Resources; Caltrans, District 7; Regional Water Quality Control Board, Region 4; Department of Toxic Substances Control; Native American Heritage Commission

Date Received: 5/12/2011 **Start of Review:** 5/12/2011 **End of Review:** 6/10/2011

**Exhibit F-4. Distribution List for the Draft Initial Study/Mitigated Negative Declaration
for Copper Hill County Park**

L.A. County Department of Regional Planning Attn: Paul McCarthy, Impact Analysis Section 320 W. Temple St. Los Angeles, CA 90012	L.A. County Dept of Parks and Recreation Attn: Joan A. Rupert, Section Head/Environmental 510 S. Vermont Ave., Rm. 201 Los Angeles, CA 90020	L.A. County Dept of Parks and Recreation North Agency Headquarters Attn: Jim McCarthy 31320 Castaic Road Castaic, CA 91384
County of Los Angeles Environmental Health Public Swimming Pool-Recreational Health Division 5050 Commerce Drive Baldwin Park, CA 91706	Los Angeles County Police Park Services Bureau Attn: Chief William G. Nash 2101 N. Highland, Bungalow D Los Angeles, CA 90068	L.A. County Sheriff's Department Director of Facilities Planning Attn: Michael Kameya 1000 S. Fremont Ave. Bldg A9-East, 5 th Floor North Alhambra, CA 91803
L.A. County Office of County Counsel Attn: Lauren Dods 652 Kenneth Hahn Hall of Administration 500 W. Temple St. Los Angeles, CA 90012	Los Angeles County Fire Department Fire Prevention North Region Area 3 Office 23757 Valencia Blvd. Valencia, CA 91355	County of Los Angeles Sanitation District Planning Division Attn: Adrianna Rasa P.O. Box 4998 Whittier, CA 90607-4998
Los Angeles County Chief Executive Office Attn: Alisa Cheipian Los Angeles County Hall of Administration 500 W. Temple Street Los Angeles, CA 90012	Southern California Edison Attn: Kyle Thompson (Planning) 25625 Rye Canyon Road Valencia, CA 91355	Ron F. Silver, Project Manager So. California Gas Company Gas Transmission Technical Services 9400 Oakdale Ave., Mail Location SC9314 Chatsworth, CA 91311-6511
County of Los Angeles Public Health Attn: Patrick Nejadian, Program Director Land Use Program 5050 Commerce Drive Baldwin Park, CA 91706	William Gonzales, THCP Committee Chairman Fernandeño Tataviam Band of Mission Indians 601 South Brand Blvd, Suite 102 San Fernando, CA 91340	Newhall County Water District P.O. Box 220970 Santa Clarita, CA 91322-0970
Rosalind Wayman, Field Deputy Los Angeles County Fifth Supervisorial District Santa Clarita Valley Office 23920 Valencia Blvd., Suite 265 Santa Clarita, CA 91355	James M. Gibson, Superintendent Castaic Union School District 28131 Livingston Ave. Valencia, CA 91355	Jeff Ford Castaic Lake Water Agency 27234 Bouquet Canyon Road Santa Clarita, California 91350
Rob Streed, Senior ROW Agent British Petroleum BP US Pipelines and Logistics 4 Centerpointe Drive, Room 4-382 La Palma, CA 90623	Reference Librarian Valencia Public Library 23743 Valencia Boulevard Valencia, CA 91355-2105	Reference Librarian Castaic Public Library 27971 Sloan Canyon Rd. Castaic, CA 91384
Castaic Lake RV Park 31540 Ridge Route Road Castaic, CA 91384	Days Inn – Castaic 31410 Castaic Road Castaic, CA 91384	Castaic Lake Storage 31442 Castaic Road Castaic, CA 91384

Exhibit F-5. Comment Letter No. 1



NEWHALL COUNTY WATER DISTRICT

23780 North Pine Street • P.O. Box 220970 • Santa Clarita, CA 91322-0970
(661) 259-3610 Phone • (661) 259-9673 Fax • email: mail@ncwd.org

Directors: DANIEL MORTENSEN, *President* MARIA GUTZEIT, *Vice President* B. J. ATKINS KATHY COLLEY LYNNE A. PLAMBECK

May 16, 2010

Mohamed Sultan, Project Manager
Department of Public Works
Project Management Division I
900 South Fremont Avenue, 5th Floor
Alhambra, California 91803

**RE: CASTAIC SPORTS COMPLEX POOLS PROJECT
NOTICE OF COMPLETION OF DRAFT INITIAL STUDY/MITIGATED
NEGATIVE DECLARATION**

Dear Mr. Sultan:

Thank you for the opportunity to prepare comments for the public review of the Draft Initial Study/Mitigated Negative Declaration for the "*Castaic Sports Complex Pools*" Project. Newhall County Water District (NCWD) has reviewed the Mitigated Negative Declaration and is submitting the following comment for consideration.

NCWD is looking forward to working with the project applicant to bring the project to fruition. The project site lies within the NCWD service jurisdiction. The Mitigated Negative Declaration should include information that NCWD will provide the water service for the pool complex. Currently the document designates the Castaic Lake Water Agency as the provider (pgs. 61-62, Section XVII. Utilities and Service Systems). } 1-1

The District appreciates your consideration of this comment. If further clarification or discussion is needed, please contact me at (661) 259-3610.

Very truly yours,

NEWHALL COUNTY WATER DISTRICT


Stephen L. Cole
General Manager

Established in 1953

Exhibit F-6. Comment Letter No. 2

From: Daniel Blankenship [DSBlankenship@dfg.ca.gov] Sent: Thu 6/9/2011 5:07
To: Sultan, Mohamed - Consultant
Cc:
Subject: CEQA MND Castaic Pools Complex

Dear Mr. Mohamed Sultan,

Thank you for the opportunity to comment on the above referenced MND. The Department concurs with the biological information provided within the MND and recommends including a nesting bird mitigation measure in the MND before approving the project.

Impacts to migratory wildlife affected by the project should be fully evaluated including proposals to remove/disturb native and ornamental landscaping and other nesting habitat for native birds. Impact evaluation may also include such elements as migratory butterfly roost sites and neo-tropical bird and waterfowl stop-over and staging sites. All migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of birds and their active nests, including raptors and other migratory nongame birds as listed under the MBTA. 2-1

Proposed project activities (including disturbances to vegetation) should take place outside of the breeding bird season (February 1- September 1) to avoid take (including disturbances which would cause abandonment of active nests containing eggs and/or young). If project activities cannot avoid the breeding bird season, nest surveys should be conducted and active nests should be avoided and provided with a minimum buffer as determined by a biological monitor (the Department recommends a minimum 500-foot buffer for all active raptor nests). Please consult with the Department, as needed, regarding buffers. 2-2

Please contact Dan Blankenship, Staff Environmental Scientist, if you have any questions regarding this mitigation measure.

Exhibit F-7. Comment Letter No. 3



COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

STEPHEN R. MAGUIN
Chief Engineer and General Manager

June 9, 2011

File No: SCV-00.04-00

Mr. Mohamed Sultan, Project Manager
Project Management Division I
Department of Public Works
900 South Fremont Avenue, 5th Floor
Alhambra, CA 91803-1331

Dear Mr. Sultan:

Castaic Regional Sports Complex Pool Project

The County Sanitation Districts of Los Angeles County (Districts) received a Mitigated Negative Declaration for the subject project on May 16, 2011. The proposed development is located within the jurisdictional boundaries of the Santa Clarita Valley Sanitation District. We offer the following comments:

1. Previous comments submitted by the Districts in correspondence dated March 9, 2011 (copy enclosed), to Mr. Peter Zah of Perera Inc., still apply to the subject project with the following updated information.
2. The Santa Clarita Valley Joint Sewerage System currently processes an average flow of 20.1 million gallons per day. } 3-1
3. The expected average wastewater flow from the first phase of the project is 5,100 gallons per day (gpd). The expected average wastewater flow from second phase of the project is 3,000 gpd. } 3-2
4. All other information concerning Districts' facilities and sewerage service contained in the document is current.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2717.

Very truly yours,

Stephen R. Maguin

A handwritten signature in black ink that reads "Adriana Raza".

Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:ar

Enclosure

c: S. Wienke

Doc #: 1035140.1
Recycled Paper A small logo consisting of three chasing arrows forming a triangle, representing a recycling symbol.

Exhibit F-7. Comment Letter No. 3 (Cont'd)



COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

STEPHEN R. MAGUIN
Chief Engineer and General Manager

March 9, 2011

File No: SCV-00.00-00

Mr. Peter Zah, Estimator
Perera Inc.
2890 Inland Empire Boulevard
Suite 102
Ontario, CA 91764

Dear Mr. Zah:

Castaic Regional Sports Complex Pool Project

This is in response to your request for a will serve letter for the subject project, which was received by the County Sanitation Districts of Los Angeles County (Districts) on February 17, 2011. The proposed development is located within the jurisdictional boundaries of the Santa Clarita Valley Sanitation District. We offer the following comments regarding sewerage service:

1. The proposed project may require a Districts' permit for Industrial Wastewater Discharge. Project developers should contact the Districts' Industrial Waste Section at extension 2900, in order to reach a determination on this matter. If this permit is necessary, project developers will be required to forward copies of final plans and supporting information for the proposed project to the Districts for review and approval before beginning project construction. For additional Industrial Wastewater Discharge Permit information, go to www.lacsd.org, Information Center, and Industrial Waste. } 3-3
2. The wastewater flow originating from the proposed project will discharge directly to the Districts' Castaic Trunk Sewer, located in Castaic Road south of Neely Street. This 15-inch diameter trunk sewer has a design capacity of 4.1 million gallons per day (mgd) and conveyed a peak flow of 1.3 mgd when last measured in 2008. A direct connection to a Districts' trunk sewer requires a Trunk Sewer Connection Permit, issued by the Districts. For information regarding the permit, please contact the Public Counter at extension 1205. } 3-4
3. The District operates two water reclamation plants (WRPs), the Saugus WRP and the Valencia WRP, which provide wastewater treatment in the Santa Clarita Valley. These facilities are interconnected to form a regional treatment system known as the Santa Clarita Valley Joint Sewerage System (SCVJSS). The SCVJSS has a design capacity of 28.1 mgd and currently processes an average flow of 20.2 mgd. } 3-5
4. The expected average wastewater flow from the project site is 7,880 gallons per day. For a copy of the Districts' average wastewater generation factors, go to www.lacsd.org, Information Center, Will Serve Program, Obtain Will Serve Letter, and click on the appropriate link on page 2. } 3-6

Exhibit F-7. Comment Letter No. 3 (Cont'd)

Mr. Peter Zah

-2-

March 9, 2011

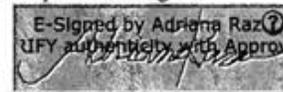
5. The Districts are authorized by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System or increasing the strength or quantity of wastewater attributable to a particular parcel or operation already connected. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the Sewerage System to accommodate the proposed project. Payment of a connection fee will be required before a permit to connect to the sewer is issued. For a copy of the Connection Fee Information Sheet, go to www.lacsd.org, Information Center, Will Serve Program, Obtain Will Serve Letter, and click on the appropriate link on page 2. For more specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at extension 2727. 3-7

6. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the design capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CAA. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise you that the Districts intend to provide this service up to the levels that are legally permitted and to inform you of the currently existing capacity and any proposed expansion of the Districts' facilities. 3-8

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2717.

Very truly yours,

Stephen R. Maguin



Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:ar

c: S. Wienke

Exhibit F-8. Comment Letter No. 4



COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

(323) 890-4330

DARYL L. OSBY
FIRE CHIEF
FORESTER & FIRE WARDEN

August 22, 2011

Mohamed Sultan, Project Manager
Department of Public Works
Project Management Division I
900 South Fremont Avenue, 5th Floor
Alhambra, CA 91803

Dear Mr. Sultan:

MITIGATED NEGATIVE DECLARATION, NOTICE OF COMPLETION OF DRAFT INITIAL STUDY, CASTAIC SPORTS COMPLEX POOLS PROJECT, PROPOSE TO CONSTRUCT A NEW SWIMMING POOL COMPLEX, 31230 CASTAIC ROAD, CASTAIC (FFER #201100079)

The Mitigated Negative Declaration has been reviewed by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department. The following are their comments:

PLANNING DIVISION:

1. We have no comments at this time.

LAND DEVELOPMENT UNIT:

1. The development may require fire flows up to 5,000 gallons per minute at 20 pounds per square inch residual pressure for up to a five-hour duration. Final fire flows will be based on the square footage of the first floor and the type of construction to be used. The exact fire flow will be determined with the submittal of plans. } 4-1
2. Fire hydrant spacing shall be 300 feet and shall meet the following requirements: } 4-2

SERVING THE UNINCORPORATED AREAS OF LOS ANGELES COUNTY AND THE CITIES OF:

AGOURA HILLS	BRADBURY	CUDAITY	HAWTHORNE	LA MIRADA	MALIBU	POMONA	SIGNAL HILL
ARTESIA	CALABASAS	DIAMOND BAR	HIDDEN HILLS	LA PUENTE	MAYWOOD	RANCHO PALOS VERDES	SOUTH EL MONTE
AZUSA	CARSON	DUARTE	HUNTINGTON PARK	LAKWOOD	NORWALK	ROLLING HILLS	SOUTH GATE
BALDWIN PARK	CERRITOS	EL MONTE	INDUSTRY	LANCASTER	PALMDALE	ROLLING HILLS ESTATES	TEMPLE CITY
BELL	CLAREMONT	GARDENA	INGLEWOOD	LAWDALE	PALOS VERDES ESTATES	ROSEMead	WALNUT
BELL GARDENS	COMMERCE	GLEN DORA	IRVINDALE	LONGITA	PARAMOUNT	SAN DEMAS	WEST HOLLYWOOD
BELLFLOWER	COVINA	HAWAIIAN GARDENS	LA CANADA FLINTRIDGE	LYNWOOD	PICO RIVERA	SANTA CLARITA	WESTLAKE VILLAGE
			LA HABRA				WHITTIER

Exhibit F-8. Comment Letter No. 4 (Cont'd)

Mohamed Sultan, Project Manager
August 22, 2011
Page 2

- a. No portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant. } 4-3
- b. No portion of a building shall exceed 400 feet via vehicular access from a properly spaced public fire hydrant. } 4-4
- c. Additional hydrants will be required if hydrant spacing exceeds specified distances. } 4-5
- 3. This property is located within the area described by the Forester and Fire Warden as a Fire Zone 4, Very High Fire Hazard Severity Zone (VHFHSZ). All applicable fire code and ordinance requirements for construction, access, water mains, fire hydrants, fire flows, brush clearance and fuel modification plans, must be met. } 4-6
- 4. Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in-length. } 4-7
- 5. All on-site driveways/roadways shall provide a minimum unobstructed width of 26 feet, clear-to-sky. The on-site driveway is to be within 150 feet of all portions of the exterior walls of the first story of any building. } 4-8
- 6. Driveway width for non-residential developments shall be increased when any of the following conditions will exist:
 - a. Provide 34 feet in-width, when parallel parking is allowed on one side of the access roadway/driveway. Preference is that such parking is not adjacent to the structure.
 - b. Provide 42 feet in-width, when parallel parking is allowed on each side of the access roadway/driveway.
 - c. Any access way less than 34 feet in-width shall be labeled "FIRE LANE" on the final recording map, and final building plans.
 - d. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING - FIRE LANE" in three-inch high letters. Driveway labeling is necessary to ensure access for Fire Department use.} 4-9
- 7. No part of a building can be within 100 feet of the drip line of high voltage transmission power line (66kV or greater). } 4-10

FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS:

- 1. The statutory responsibilities of the County of Los Angeles Fire Department, Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance.

Exhibit F-8. Comment Letter No. 4 (Cont'd)

Mohamed Sultan, Project Manager
August 22, 2011
Page 3

2. The areas germane to the statutory responsibilities of the County of Los Angeles Fire Department, Forestry Division have been addressed.

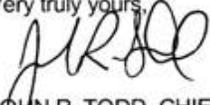
HEALTH HAZARDOUS MATERIALS DIVISION:

1. The Health Hazardous Materials Division has no objection to the proposed project. However, it should be noted that any potential contamination encountered during construction must be assessed and mitigated according to State/Federal guidelines prior to continuation of construction. The site health and safety plan should also address possibility of potential petroleum hydrocarbons and/or volatile organic compounds at the construction site.

} 4-11

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,



JOHN R. TODD, CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

JRT:lj

Exhibit F-9. Letter from State Clearinghouse



JERRY BROWN
GOVERNOR

STATE OF CALIFORNIA
GOVERNOR'S OFFICE of PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT



June 13, 2011

Mohamed Sultan
Los Angeles County
900 S. Fremont Ave., 5th Floor
Alhambra, CA 91803

Subject: Castaic Pools Complex
SCH#: 2011051032

Dear Mohamed Sultan:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. The review period closed on June 10, 2011, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

A handwritten signature in black ink that reads "Scott Morgan".

Scott Morgan
Director, State Clearinghouse

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Exhibit F-7. Letter from State Clearinghouse (Cont'd)

**Document Details Report
State Clearinghouse Data Base**

SCH# 2011051032
Project Title Castaic Pools Complex
Lead Agency Los Angeles County

Type MND Mitigated Negative Declaration
Description The County of Los Angeles Department of Public Works proposes to construct a new swimming pool complex on 3.5 acres of vacant County-owned land immediately north of the Los Angeles County Department of Parks and Recreation - North Agency Headquarters along Castaic Road. The pool complex would be constructed in two phases. Phase I of the complex would include a recreational pool, shallow pool, splash pad, pool building and parking lot with a new entrance. Phase II would include expansion of the pool building, addition of an Olympic-size swimming pool, and a new parking lot east of the complex (construction of Phase II is contingent upon funding). The pools complex would be operated by the County of Los Angeles Department of Parks and Recreation.

Lead Agency Contact

Name Mohamed Sultan
Agency Los Angeles County
Phone 626 300 2349 **Fax**
email
Address 900 S. Fremont Ave., 5th Floor
City Alhambra **State** CA **Zip** 91803

Project Location

County Los Angeles
City
Region
Lat / Long
Cross Streets Castaic Road and Ridge Route Road
Parcel No. 2865-012-916, -907
Township 5N **Range** 17W **Section** 25 **Base**

Proximity to:

Highways I-5
Airports No
Railways No
Waterways Castaic Creek
Schools Yes
Land Use LU: Vacant
Z: OS-PR
GPU: OS

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Wildlife; Growth Inducing; Toxic/Hazardous; Traffic/Circulation; Vegetation; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Drainage/Absorption; Landuse; Cumulative Effects; Other Issues; Soil Erosion/Compaction/Grading; Noise; Water Quality; Water Supply; Solid Waste; Public Services; Recreation/Parks

Reviewing Agencies Resources Agency; Department of Fish and Game, Region 5; Department of Parks and Recreation; Department of Water Resources; Caltrans, District 7; Regional Water Quality Control Board, Region 4; Department of Toxic Substances Control; Native American Heritage Commission

Date Received 05/12/2011 **Start of Review** 05/12/2011 **End of Review** 06/10/2011

Note: Blanks in data fields result from insufficient information provided by lead agency.